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Apple districts of West Virginia


L. C. Corbett

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WEST VIRGINIA UNIVERSITY
AGRICULTURAL EXPERIMENT STATION,
MORGANTOWN, W. VA.

BULLETIN 75.

APRIL, 1901.

Apple Districts of West Virginia.



—○—
BY L. C. CORBETT.

—○—
[The Bulletins and Reports of this Station will be mailed free to any citizen of West Virginia upon written application. Address Director of Agricultural Experiment Station, Morgantown, W. Va.]

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West Virginia's Apple Orchards.

Few people outside the immediate neighborhood of our fruit producing counties have any conception of the intensity or magnitude of this industry in our State. The State has, at present, two developed orchard areas, one situated in the northern counties bordering the Ohio river, and the other in that line of counties along the Potomac from the crest of the Allegheny mountains eastward.

In the north and west Hancock county leads all others, both in number and size of its orchards, as well as in the aggregate output. Here we find orchards ranging from a few hundred trees to the unusual number of 18,000, under a single management. Several orchards contain upwards of 4,000 trees, while the second largest contains not far from 9,000 bearing trees. As early as 1896 the crop of this, now famous region, reached the enormous number of 100,000 barrels, 300,000 bushels. This crop was borne by a land area not exceeding 2,000 acres: the value of the crop for that year alone was not far from \$250,000, most of which was divided among about twenty men. The one station of New Cumberland handled during that season 70,000 barrels, in round numbers. The soil, climate and skill of the growers all seem to be the best possible for the development of a commercial apple industry. So far, the orchards in Hancock county have been remarkably free from both insect pests and fungus diseases. During the fall of 1899, however, the Bitter Rot made its appearance upon the Bently Sweet in a few orchards. Fortunately, however, the disease has so far confined its attack to this one variety. Steps have been taken by the Horticulturist of the State Experiment Station to check the ravages of this enemy by the use of proper spraying mixtures. If this work proves successful an industry such as above described will be safe; but should no means of

checking the disease be found, one of the most complete fruit developments in Eastern United States is doomed to more or less complete annihilation.

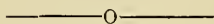
The product of this orchard area is of very considerable value, but the investment in soil, trees and store houses is many times the value of a single crop. No less than six large storage and warehouses have been provided for the retention of the products of these orchards. The smallest of these houses has a capacity of 2,500 barrels, while the largest holds 35,000. Here the fruit is stored from harvest until a suitable market offers, when the fruits are assorted, repacked and sent to the South or East, according to the demand.

Hancock county lies in a section suited to the growth of the Cow Pea, and already the use of this crop in the orchards is working wonders in the way of adding vigor and thrift to the trees, as well as inducing the growth of clover on lands which were before exceedingly difficult to seed with that crop.

An index of the superior merit of the fruit produced in Hancock county is had in the form of Special Mention for Willow Apples Grown by Charles Brown's Sons, Arroyo, W. Va., at the Paris Exposition. This comes as the result of fruit sent to the Paris Exposition as an exhibit of the W. Va. Horticultural Society. This Special Mention is in addition to the second prize awarded the State display as a whole.

The Hancock county region is by no means the only developed orchard region of the State. Berkeley and Jefferson county growers pride themselves on having some of the most profitable orchards in Eastern United States. The famous orchard of John Miller needs no further comment than mere mention. The example of Mr. W. S. Miller and a few other successful growers on "Apple Pie Ridge," which is in reality a part of the famous Albemarle Pippin region of Virginia, has stimulated many others to follow their example, and now the county of Berkeley contains not far from 3,000 acres of apple orchard and probably 1,500 of peach trees. These are in the main young orchards, so that while the annual product of the county at present is only 50,000 or 60,000 barrels, yet in 1899 alone over \$200,000 came into the county as a result of the fruit

industry. The time is not far distant when the output will exceed that of the older Hancock county region. If the growers of these two regions were to come into closer contact each would be mutually benefitted. The Hancock county growers would find valuable suggestions in the cultural methods of Berkeley county, while the harvesting and marketing methods of the Hancock county orchardists would increase the profit on the Berkeley county product 10 per cent.



A STUDY OF THE APPLE CROP OF OUR STATE, WITH SUGGESTIONS FOR ITS INCREASE.



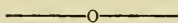
The fruit products of our State are at once suggestive and encouraging when viewed from a commercial standpoint. The apple output is remarkable considering the small area devoted to it. The crops are regular, large, made up of long keeping varieties of high quality. With orchards of this character in the State, the wonder is that the area devoted to this industry is so limited. An explanation for this condition may, perhaps, be found in that until very recently such a perishable product as fruit could not be successfully transported to the great seaboard cities from the more remote sections of our State. Still another reason may be found in the remarkable manner in which most of the best orchard land is suited to grazing purposes. Cattle and sheep thrive well upon the blue grass, which is such an important factor in the agriculture of West Virginia and Kentucky. More recently, however, the cattle business has been transferred to the plains, and since there is no outlet for the owners of mountain land along the line of general grain raising, a new industry must be worked out to fill the loss of the cattle business. This may be met by two lines of work—the growing of high grade mutton and high grade fruit, either as separate industries or in combination. Many States come in competition with us in the production of mut-

ton, but the areas in which fruits of high quality, fine appearance and in paying quantities can be produced are not many. The men who have the industry and pluck to attempt fruit growing upon an extensive plan are not numerous. Fruit growing, while one of the highest arts of general horticulture, is, at the same time, one of the most exacting; hap-hazard methods will not do. The man who would succeed must know his soil, exposure, the fruit that he intends to grow, the market and the peculiarities of that market. He must have a knowledge of the chief enemies and diseases which are apt to attack his trees or their fruits and the remedies for combating them. With such a statement before him, one, upon first thought, finds little to attract him to fruit growing; but for an ambitious, energetic man these are all factors which make for his success. Why? Because the indolent and the "doless" will have no fruit to compete with the careful cultivator. In this respect horticulture holds out more inducements than does general agriculture. If one plants corn, and only half cares for it, he is pretty certain to get something that the market will take; but in the case of fruits the market is more exacting. A good product will sell at a profit, when the fairly good and inferior either sells at a loss or is thrown upon the garbage heap.

In fruit growing the skill and taste displayed by the shipper counts for more in making a market for his product than in any other branch of agriculture. Uniform, neat and appropriate shipping cases always add to the value of the product, and slovenly packages invariably detract from the sale of an otherwise high grade commodity. In our own State no one factor has had more to do with the tardy growth of the fruit business than the indiscriminate planting of a great many varieties. The lists which are made a part of this report are the best proof of this statement. The influence of this style of planting has been to retard commercial development by catering to home demand. This was usually limited, and the surplus fruit was not such as to attract the apple buyers. The varieties offered were as numerous as the individuals offering them. In fact, in most localities where a thousand barrels of apples could be purchased, it would be necessary to accept at least thirty different sorts to make up the lot.

In apple growing sections generally the great apple crops are not the products of large orchards owned and operated by companies and corporations, but on the contrary the great mass of this product comes from the farm orchard, which usually consists of five to fifteen per cent. of the area of the farm. A farm of one hundred acres will have from eight to fifteen acres in orchard. The feature of this planting is that while there is usually a sufficient assortment, by far the greater bulk of the product consists of Baldwins, Greenings, Kings or Spys. In our State orchards are no less numerous, but the varieties are often not well selected, and they are too many.

Buyers are attracted to localities where large quantities of standard sorts are grown. It is a good rule in general planting to learn what varieties thrive best and bear most regularly and abundantly in your locality. Do not purchase untried sorts for commercial planting; the ideal variety is a favorite in the market and at the same time one that has stood the test in your locality.



GRAFTING.



Profitable apple growing in our State is not more general because of a lack of trees to make it so, but because the trees we do have bear undesirable sorts. This difficulty can be remedied by *grafting*. All trees bearing undesirable sorts, and all seedling trees not of special merit should be grafted. If you decide to change the character of your orchard product by this means every available source of information should be taken advantage of in order that no mistake be made in the selection of the *sort* to be used. I use the word *sort*, for I am of the opinion that *one* or *two* varieties at most are sufficient for the commercial portion of any farm orchard, and that variety should be the same as that grown by the majority of one's neighbors. The reason, as stated before, being that a large quantity of one kind attracts the buyer. Top working by the cleft graft method is easily and quickly accomplished.

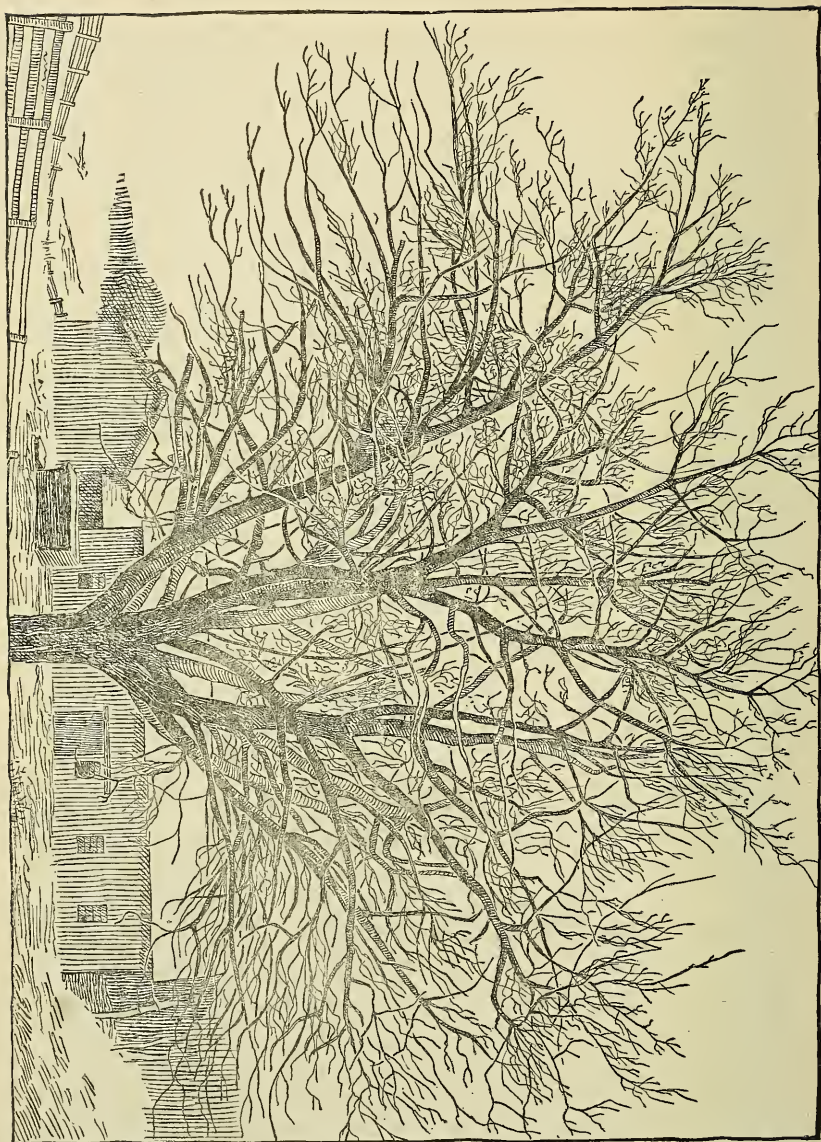


FIG. 1.—(after Bailey) A 25-YEAR-OLD APPLE TREE BEFORE TOP-GRAFTING.

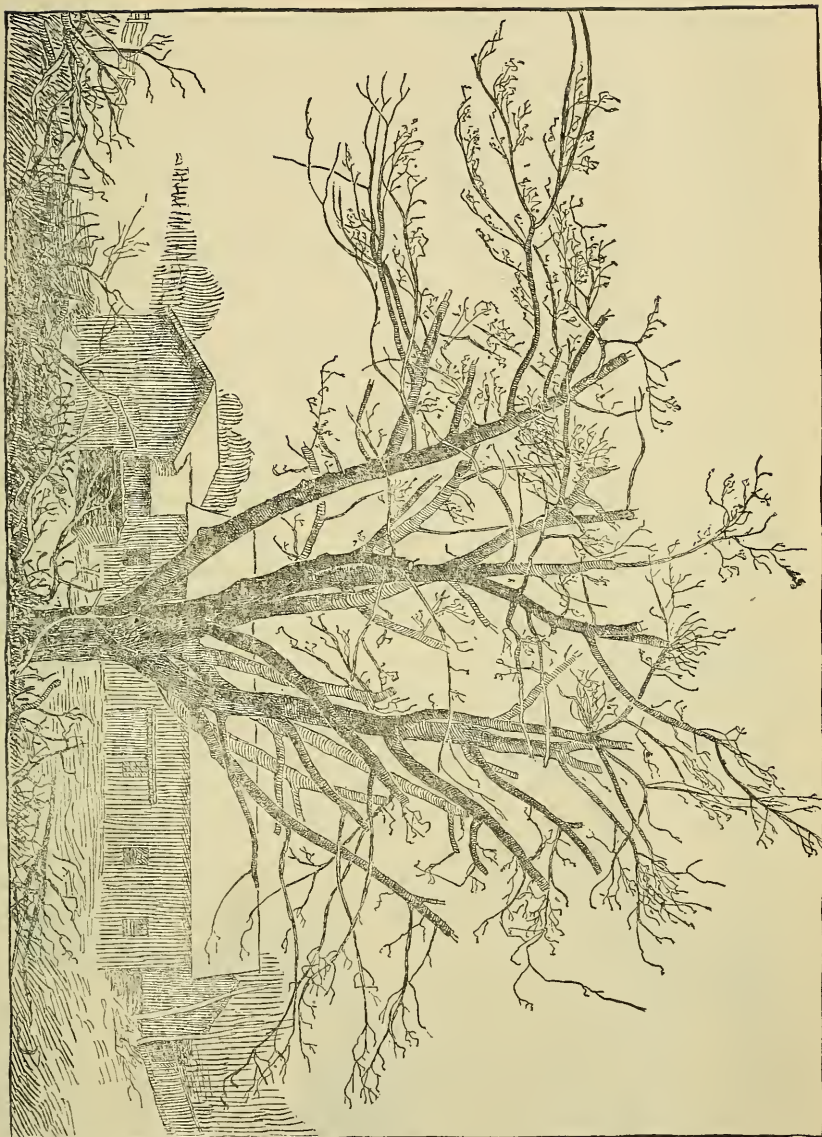


FIG. 2.—(after Bailey) TOP-GRAFTED TREE. FIG. 1 AFTER BEING OPERATED UPON.

A young tree can be changed in a single season; a tree ten years old in two years, and one twenty or more years old in three years.

The method of accomplishing this result is shown in the accompanying illustrations. Figure 1 represents a tree twenty-five years old before being grafted; figure 2 shows the same tree after the cions were set. The next year the growth from the cions will be sufficient to allow the remaining limbs to be removed from the tree shown in figure 2. When the stubs from the second year's cutting have been grafted the top of the tree will have been completely changed into the new variety. As will be noted from a glance at the drawing, the idea in top grafting is not to remove a few large limbs, but on the contrary to remove a larger number of smaller limbs, ranging in size from one inch to one and one half inches in diameter. In all this work it should be the aim of the operator to preserve the symmetry of the tree by cutting the stubs to receive the cions at a uniform distance from the center of the top of the tree. If this is looked after, the long bare limbs characteristic of so many top-worked trees can be avoided. Figure 3 shows an orchard which has been top-grafted and the fault above mentioned very successfully avoided. The position of the cions should be in a line parallel with the horizontal; in other words, the cions should stand so that one is not above the other.



FIG. 4.

The method of making the cleft graft, which is the style usually used for top working large trees, is here shown in figures 3 to 6. Figure 4 shows the work, as completed, ready for waxing. Figure 5 illustrates the tool used for splitting and spreading the stock ready for the reception of the cions. A cion is shown in figure 6 at A, and a cross section of the wedge shaped end at B. The reason for giving the

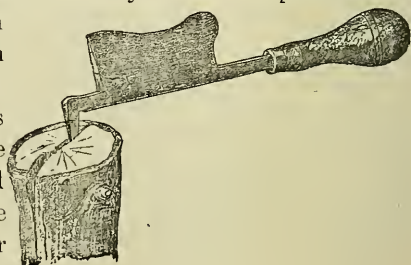


FIG. 5.

wedge-shaped end of the cion a thin inner surface is to bring th

pressure of the stock against the outer edge of the cion so as to firmly press the growing portion of the cion against that of the stock. When the cion is set in the stock a slight inclination outward is given so that the outer ends of the cions are farther apart than at the top of the stub. This insures contact of the growing tissue of the cion with that of the stock by causing them to cross. The position of the cion in relation to the stock is shown in figure 7. In this figure the inner bark of both cion and stock are in contact, while the difference in the thickness of the outer bark of the two causes a decided break in the outline at a point where the cion is inserted. This style of grafting is called cleft grafting.



E.H.

FIG. 6.

Waxing is quite as important as a proper adjustment of the scions. This consists in covering all cut or exposed surfaces with grafting wax, grafting clay, or some non-corrosive substance which will exclude air and moisture. The wax may be applied hot, with a brush, but the safest plan is to spread it with the hand while it is only sufficiently heated to allow it to be worked like taffy. If spread carefully over all cut surfaces and pressed closely, upon cooling it will form a sleek coating quite impenetrable to air and moisture.



FIG. 7.

Grafting Wax. In this climate a soft wax is not desirable for exposed work. Soft wax may be used in whip-grafting, but in cleft grafting where all wounded surfaces are exposed to the weather, a hard wax, made by melting together five pounds resin, two and a half pounds beeswax, and one-half pound of tallow or one-half pint of linseed oil, is preferable.

Not only can an orchard be made to produce a merchantable product by top grafting in the manner above described, but it can really be rejuvenated. Grafting not only makes the tree over as far as its product is concerned, but the severe pruning to which it has been subjected to prepare it for grafting induces a strong, vigorous growth which seems to have a very advantageous effect upon the tree as a whole.

In connection with the process of rebuilding, cultivation should not be overlooked. If we renew the machinery and get it in good working order, what will it avail unless there is fuel to keep it going? A tree must have fuel and water in order to produce fruit. Cultivation is the easiest and often the cheapest way to supply the needs of the tree, but if the orchard is twenty years or more old, it is more than likely the available quantity of some of the important food ingredients have been well depleted, and that a more profitable return may be had by applying the lacking material in the form of a manure or fertilizer. The two elements most likely to be lacking under the conditions, *i. e.*, in an old orchard, are nitrogen and phosphoric acid. If the growth is good and the foliage is dark green in color and remains well upon the trees in the fall, then the chances are that if anything is needed it is phosphoric acid. If a complete manure is considered necessary, *i. e.*, one containing nitrogen, phosphoric acid and potash, stable manure may be used. A dressing of fine, ground bone meal at the rate of 500 lbs. per acre may be found more advantageous. Charles Brown's Sons, Hancock county, have worked wonders in one of their orchards by a single application of 800 lbs. of bone meal to the acre, without other cultivation. The increased value of the crop upon the portion of the orchard so treated during the past season, (1899) more than paid for the cost of material and the labor of applying it. The added vigor and luxuriance of the trees alone would be enough to pay for this expense, but the assurance of future crops which this brings makes it a paying investment.

If a special nitrogenous fertilizer seems desirable, then Nitrate of Soda may be used with good effect, while a special phosphoric acid fertilizer is easily and cheaply obtained in odorless slag phosphate or South Carolina Rock.

Some preliminary tests with fertilizers upon orchard trees seem to indicate that phosphoric acid is the one element most likely to be lacking in the orchard soils of our State.

By judicious grafting and intelligent cultivation and manuring the commercial value of the apple crop of our State can be increased four-fold, in three years, without the planting of a single new tree.



FIG. 3—TOP GRAFTED ORCHARD.

APPLE REGIONS, INDICATED BY CROP OF 1898.

During the Spring of 1898, warm days were the rule from the middle of February till the last of March. On March 29th, peach buds were open in localities nearest sea level and where the exposure was such as to excite growth. At this date, however, conditions changed, a heavy freeze came on the night of March 29th-30th, and from that date on, for the next twenty days, all conditions were unfavorable to the growth of plants. As a result, all peach buds in localities where growth had been pushed forward, were killed. Even apples and pears were destroyed, the freeze was so severe.

All localities did not suffer from the cold wave which had caused such destruction to fruit buds at Morgantown. The apple orchards of the northern panhandle escaped with little if any injury; but reports came in from various quarters chronicalling the great havoc which had been wrought by the freeze. Such freezes are common from year to year in certain portions of our State, while other localities not far removed, escape injury. It is evident, therefore, that commercial fruit growing will be most remunerative in those localities possessing climatic conditions which protect them from such changes in temperature. The opportunity offered by the severe cold wave which came March 29th, was taken advantage of by the horticulturist for the purpose of gaining a general idea of the areas where injury had occurred, as well as those that had escaped. It is believed that a canvass of the State on that basis gives a very accurate idea of the general localities where commercial fruit growing can be engaged in with fair assurance that the crop will not be injured by any ordinary late Spring frost.

In certain places no one factor causes a more frequent loss of the fruit crop than late Spring frosts.

Before giving the data resulting from the phenological survey of the State, it will be profitable to consider some of the factors which render one locality subject to late frosts, while others almost invariably escape injury.

In general we say that such good or evil results are dependent upon the climate of the place; but what is climate? Popular notion makes climate almost solely dependent upon annual mean temperature. Some of the most grievous blunders of the past horticultural ventures of this country have come through an evident misconception of the true idea of a climate: Climate is a general term, and should suggest to the mind not only the temperature of the place in summer, but during winter as well. The mean annual temperature is not a good guide; it should also suggest latitude, altitude, exposure, proximity to bodies of water or to large forest areas; the intensity and prevalence of sunlight; the prevailing winds; as well as the amount and distribution of the rainfall. In one locality a certain combination of these factors may be present to determine its climate, while in another, another set of factors quite different from those in the first, may determine its climate. In general, local climate and its bearing upon horticultural pursuits is largely determined by exposure, elevation and proximity to large bodies of water. The ameliorating influence of the Great Lakes make the famous Michigan peach belt a possibility, as well as rendering southern Ontario suited to grape growing and even to peach culture.

In our own State one locality may be suited to peach growing, while another, only a few miles distant, is in no way adapted to the industry. In one case exposure alone may make the difference, while in another it may be due to elevation, or air drainage.

In the survey which was made during the season of 1898, no attempt was made to explain why the buds were killed at Morgantown, and why they were not at Reedsville. The inquiry was for the purpose of determining the frosty and safe localities regardless of the factors which determined the difference.

The facts here presented were gathered by addressing the following questions to three or four special correspondents in each county of the State :

QUESTIONS ASKED.

1. Give the names of persons in the county who have apple orchards carrying a crop of fruit this fall—1898.
2. Are the orchards which bear most regularly upon high land, hill tops, hill sides, or on bottom lands of a valley?
3. Is there a large stream flowing near the best orchards, and if so what is its name?
4. In what directions do the lands face which carry orchards bearing most regularly?

These blanks were very generally returned, and the persons filling them out showed themselves familiar with the subject and interested in it.

The writer, therefore, takes this opportunity of expressing his appreciation for the kind co-operation and assistance of all who have been kind enough to fill out the above blank, or any of the others which have made the records which this bulletin contains possible.

The evidence gathered by the survey is shown in a graphic way by the accompanying map, Fig. 8.

The blank circles indicate the counties reporting no crop in 1898, while the area of the circle blackened represents the proportion of an average crop reported for the year.

A study of the distribution of the color upon the map is suggestive of the areas least liable to suffer from the late spring frosts. It, at the same time, clearly points out the influence of certain water courses upon the fruit crop.

In the extreme northern part of the State, occupying a part of that neck of land around which the Ohio river makes almost a complete loop, the apple crop was up to the average, although not a heavy one; while only a short distance farther south, probably a hundred miles, there is no crop reported from Marshall county. The crop was light along the Ohio until the section included between it and the Great Kanawha river, here again reports indicate much more fruit than in other counties.

The most striking feature brought out by the survey was the almost total failure of a crop in the counties traversed by the Monongahela and Little Kanawha rivers. The area drained by

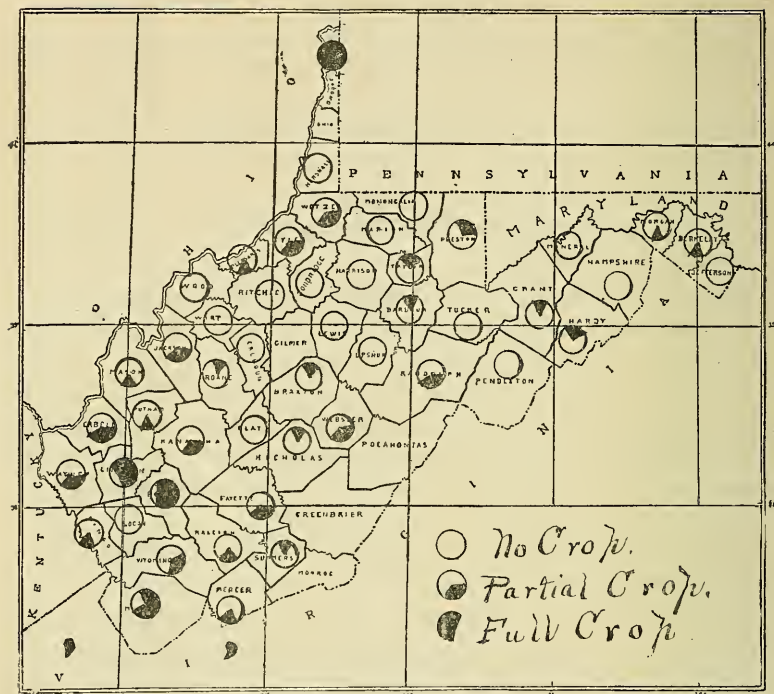


FIG. 8.

these rivers causes a divide between the north-west and south-east sections of the State. On both sides of this belt there was more or less of a crop reported. A line drawn from Morgantown to Weston, and thence westward to Parkersburg, would pass through an area of country almost without apples during the fall of 1898.

While it is probable that the true explanation of this will never be known, a possible reason is found in the fact that the area indicated is not as elevated as that to the east, or as that to the north-west. Air drainage is, therefore, less perfect, and severe frosts more liable to occur, while the higher and more southerly sections escape because of elevation and latitude.

In Tucker and Pendleton counties a like result seems to follow the Cheat and the South Branch of the Potomac, while in Mineral

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and Hampshire counties the Potomac and its feeders were likely responsible for the condition indicated upon the map.

At first thought this evidence is directly opposed to the theory of the influence of bodies of water. It is not, however, as the good results only come from *large* bodies of water, while most disastrous consequences, from both early and late frosts, follow along the courses of small streams.

In Hancock county the good crop can be explained only by the good from the large river (the Ohio) in making an almost complete peninsula of the area, together with its extreme northern latitude, as compared with the remainder of the State.

Without giving a region close personal study for a series of years it would be a most difficult undertaking to predict its fitness for fruit growing, but with the aid of the suggestions which such a map as the above affords, the subject becomes less a matter of guess-work.

MAP SHOWING DISTRIBUTION OF APPLE AREAS.

The map here presented is based on an independent inquiry. A large state map was reproduced by photographic processes, and a county map mailed to several correspondents in each county of the State with the request that they indicate upon the map the areas of the county now used for commercial orcharding, as well as those areas which by soil and location were suited to the industry; such localities are indicated upon the map by the *black* cross-hatching. The heavy *red* areas denote the presence of commercial orchards, while the general *red cross-hatching* indicates all sections of the State which by soil, location, and exposure

might be used for orchard purposes. Those areas covered by both black and red cross-hatching of course represent sections in which experience and physical conditions each denote fitness for apple culture, while the red V's represent areas in which the altitude and exposure suggest the possibility of such an industry, although they were not so marked by correspondents.

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Without giving a region close personal study for a series of years, it is difficult to predict its fitness for fruit growing, but with the aid of the questions which such a map as the above affords, the subject becomes less a matter of guess-work.

RELATIVE VALUE OF VARIETIES

The accompanying table showing the Relative Value of Varieties in the several counties of the State was compiled from the reports of nearly two thousand answers to inquiries regarding the localities in which the several varieties of the list reported by the American Pomological Society thrive best. The list of varieties as suggested by the above named society was forwarded to some 10,000 citizens of the State and out of these about 2,000 were marked and returned. From those received for any county a preliminary table was made up giving the actual number of persons reporting *Ben Davis*, for example, together with the number of those reporting every other variety from that county. If every report received from a given county named *Ben Davis* it was recorded as 100. If one half of the reports mentioned *Rome Beauty* it is recorded as 50, etc., so that the table shows at a glance the relative standing of the several varieties in any county as well as bringing them on a parallel basis for comparison according to counties or sections of the State. To illustrate, *Ben Davis* followed across the table may stand 100 in Berkeley county and only 66 in Preston. This, therefore, gives the prospective planter the esteem in which this variety is held in these two counties. What is true of the *Ben Davis* is true of every other variety listed.

The italicised figures in the table are to indicate varieties held in high repute in their respective counties for commercial purposes and for regular annual bearing, particularly the latter.

The table is also divided into three sections covering the three life zones of the State, namely,—the Canadian, Transition and Upper Austral. By comparing the figures following the several varieties across these zones an idea can be gained of the fitness of the various sorts for such climatic conditions. As might be expected, the Baldwin and Fallwater appear as important sorts in the Canadian zone, while they fall off in popularity in the Transition and Upper Austral. While I do not consider these reports as final proof of the adaptability of any sort to a given locality, yet they are sufficiently reliable to serve as a general guide for commercial planting. Future studies of these problems will undoubtedly enable horticulturists to predict with a marked degree of accuracy what sorts can be planted with assurance of success in a given locality, as yet unexplored as a region for commercial orcharding. The soil, elevation, latitude and exposure of a tract being known, a list of varieties suited to it can be suggested. Such studies then have a more extended application than to merely determine which sorts are most popular in any given region.

Table Showing the Relative Value of Varieties

VARIETY NAME.	CANADIAN.					TRANSITION.						
	Grant, south-west part.	Tucker, east.	Randolph, east.	Locahontas, north center.	McDowell, east half.	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half.	Webster.
APPLE LIST.												
CRABS. (<i>P. baccata</i> .)												
Elgin												
Hyslop		100				6		16	20	16	18	12
Spitzenburg						24	24	16		32	8	36
Transcendent.....		100		50		6	12	32	20	16	24	12
Whitney No. 20.....												
COMMON APPLES (<i>P. malus</i>).												
Alexander		100		50		6				16	12	12
Arkansas (Mammoth Black Twig).		100						16		16	12	48
Autumn Swaar.....												
Baldwin		100	100	50	25	78	60	96	40	80	48	72
Belmont.....						12	12	16				
Ben Davis.....		100	100	100	50	66	72	96	40	96	40	84
Benoni.....												24
Bentley.....						6	24			32		12
Bethlemite.....		100										
Bevan												
Black (Jersey).....						12	12			16	6	
Bonum												
Bough, sweet.....		100		50		54	48	32	40		24	24
Bradford (Best Ky. Red).....											12	12
Buckingham.....		100			50				20			12
Buncome (Red Winter Pearmain.)				50		12	24	32		32	6	36
Canada Reinette.....												
Cannon (Pearmain).....		100									6	
Chenango.....		100										
Clark Pearmain.....										16	6	
Cooper.....											6	24
Cracking.....												
Early Harvest.....		100		100	75	72	72	96	40	80	60	84
Early Joe.....						12					6	12
Early Strawberry.....		100				30	24	32		64	18	24
English Russett.....		100	100	50		18	24	64		64	12	24
Fallawater.....		100	100	100	50	72	60	64	40	48	54	60
Fall Jenneting.....					25	18		32		16	6	24
Fall Orange.....						6				16		12

in the Life-Zones and Counties of the State.

TRANSITION.									UPPER AUSTRAL.										
Raleigh.	Nicholas.	Fayette.	Greenbrier, north and west.	Pendleton.	Pocahontas, except center.	Mercer.	Grant, northeast	Mineral, west corner.	Hancock.	Brooke.	Ohio.	Marshall.	Wetzel.	Monongalia.	Tyler.	Marion.	Pleasants.	Harrison.	Doddridge.
	20				50	16	25		7			8	12					16	
	20		100		25	16	50		35	40	42	48	24	75	28	45	24	40	
	20	20	100		50	48		32	14		42	24	18			27		12	16
						16		16		20		12	16					4	
	20	20			25	32	25		14	20		12	18		14			12	
		40			25	32						24	12		28	27		8	16
								16	14	40	14	12	6					8	
80	60	60	100	50	100	64	75	80	84	100	98	96	72	100	56	81	96	76	32
40						32			14	20	28	12	18					72	
100	80	60	100	50	100	96	100	64	70	100	84	96	84	100	70	90	96	84	48
20					25	32			7			12	6				12		
									14	80	42	48	24			36		24	
									68	40			6						
												12	12			18	1	8	
						16													
	20	40			50	32	75	16	68	80	42	36	42	50	28	36	36	60	32
												12	12			9		8	
60		20				64							6					4	
60			100		50	80			7	60	84	48	36		42		48	28	
													6					4	
						32		32	7	40		12	12				12	8	
								16			14								
						16							6						
								16	21	60		12			14	9	60	4	
										40			6						
100	80	80	100	50	100	96	100	64	77	70	70	96	84	100	84	81	96	88	48
							25		7	20	74	72	6			9		16	
20	80	80		50		16	25	32	14	40	56	60	54	50	14	72		64	32
	40			50		16	25	32	14	20	70	60	36	25	28	45	12	40	32
80	40	60	100	50	75	64	100	64	63	40	28	12	30	25	56	18	60	60	48
20		20	100		75	16		16	21	40			12		14		12	36	
						16			7				12			9			

Table Showing the Relative Value of Varieties in

		CANADIAN.					TRANSITION.									
VARIETY NAME.		Grant, south-west part.	Tucker, east.	Randolph, east.	Pocahontas, north centre.	McDowell, east half.	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half.	Webster.	Zipporah.	Benjamin.	
COMMON APPLES—Continued.																
Fall Pippin.					100	50	48	60	64	20	64	24	72			
Fall Wine.					100		36	36	64		48	24	24			
Fameuse.								12	36	36						
Fanny.						25										
Gapo.					100		36	12	24	36		24	12			
Gilpin.								12	36							
Golden Sweet.					100	25	30	36	64		48	24	24			
Gravenstein.					100	50	6	36	36	40	16	6				
Green Cheese.						25	6						12			
Green Newtown.						50	12									
Grimes Golden (Native).					100	100	25	60	60	96	40	64	36	24		
Haas (Fall Queen).									16							
Hewes Crab.																
Higby.																
Highton Sweet.																
Horse.								12								
Hubbardston.					100					20						
Huntsman.													12			
Jersey Sweet.					100	50	18									
Jonathan.					100		12				16					
Junaluskee.											16	6	12			
Kent Beauty.							18									
Keswick.					100					20		6				
Kinnaird.																
Lansingburg.							6									
Lawver (Delaware Red Winter).					50		18	24	16	20						
Limber Twig.					100	100	50	48	36	48	20	80	36	48		
McAfee.																
Maiden Blush.					100	100	50	66	48	96	20	96	42	60		
Mangum.																
Margaret (Early Red).						50										
Moore Sweet.						25					32	12				
Munson.						25		12		20						
Nansemond.					100		6	24	36	40	48		12			
Nickajack.					100	50	6	36			16					
Northern Spy.					100	100	25	60	60	96	40	80	48	72		
Northwestern Greening.					100		6	12			16	6				
Oconee.											16	12				

Table Showing the Relative Value of Varieties in

VARIETY NAME.	CANADIAN.					TRANSITION.						
	Grant, south-west part.	Tucker, east.	Randolph, east.	Pocahontas, north center.	McIntosh, east half.	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half.	Webster.
COMMON APPLES—Continued.												
Oldenburg, Duchess of.....	100	100				24		80	20	16	24	12
Ortley												
Paragon											6	12
Pewaukee	100	100				12		16		32		
Porter						54	12		40			
Primate.....	100											
Pryor, Red						6						
Pumpkin Sweet, Pound Sweet.....					50	18	60	48	20	32	18	60
Ralls Genet.	100			50	25	24	12	16	40	16	6	12
Rambo.....			100	100	25	66	72	80	40	96	54	72
Ramsdell Sweet.....				50		6						
Red Astrachan.....	100			50	50	54	60	80	40	32	42	24
Red Canada.....				50		6	12			16		
Red June.....	100			50	50	6	36	16	20	32	18	12
Red Stripe.....						6					12	12
Rhode Island Greening	100	100	100	25	48	72	48	40	48	24	36	
Rome Beauty	100		100	50	48	72	96	40	80	60	72	
Roxbury.....	100	100			24	24	16	40	16	18	12	
Shockley	100				25							
Shackelford.....												
Smith's Cider						12			20	16		12
Smokehouse	100	100	50	50	66	60	48	40	48	42	24	
Sops of Wine.....	100					18	24	16		16	12	12
Star.....	100					6	12				6	
Stephenson							24					
Summer King.....											6	
Summer Pearmain.....				50		6				80	6	48
Summer Queen				50				32	20	16	12	
Summer Rose									20	16	6	
Tetofski.....				50		6		16	40		12	
Tompkins King.....		100	50			36	60	64	40	64	24	24
Townsend							12				6	
Twenty Ounce				50		24	12	32	40		24	60
Vandevere	100					24		32	40		6	12
Virginia Greening.....										16	6	12
Walbridge, Edgar Red Streak.	100							32		16	6	
Wealthy	100						36	48	20	16	18	12
White June Eating.....						6	12			16	12	

Table Showing Relative Value of Varieties in

VARIETY NAME.	CANADIA .					TRANSITION.						
	Grant, south- west part.	Tucker, eas	Randolph, east.	Pocahontas, north centre.	McDowell, east half	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half	Webster.
COMMON APPLES—Continued.												
White Paradise	100				25		12		40			
White Pearmaine				50							6	
White Pippin				50				16			6	12
Willow Twig (native).....						30	12	16			12	12
Wine Hays.....							12					
Winesap.	100		100	50	30	48	80	40	96	30	60	
Yellow Bellflower.	100		100		42	60	64	40	80	24	72	
Yellow June.....							12				12	24
Yellow Transparent.....	100		50	75	30	36	32	20	32	30	36	
Yellow (New Town) Albe- marle Pippin.		100	100	25	6	12	16	20	16	12	12	
York Imperial.....	100	100	50	25	48	24	48	40	32	12	24	

the Life-Zones and Counties of the State.—Continued.

TRANSITION.									UPPER AUSTRAL.										
Raleigh.	Nicholas.	Fayette.	Greenbrier, north and west.	Pendleton.	Pocahontas, ex- cept center.	Mercer.	Grant, northeast.	Mineral, west corner.	Hancock.	Brooke.	Ohio.	Marshall.	Wetzel.	Monongalia.	Tyler.	Marion.	Pleasants.	Harrison.	Doddridge.
....	....	....	....	50	25	16	25	16	....	....	14	..	6	....	....	....	.	16	....
....	....	....	100	....	....	....	..	....	....	....	14	24	....	....	....	....	12	8	..
....	60	....	100	....	50	16	....	16	7	20	28	24	6	50	14	9	....	12	....
....	..	....	100	....	....	16	....	....	56	60	28	24	12	....	42	18	36	32	16
....	....	....	....	....	....	....	....	....	....	....	14	....	....	....	....	....	....	4	....
60	60	60	....	50	100	80	50	48	28	80	42	72	36	....	56	54	72	76	16
80	20	40	..	..	100	16	75	64	68	100	84	50	66	25	70	63	96	72	48
....	....	....	....	....	....	16	25	16	....	....	....	....	....	30	28	....	12	16	....
100	80	40	100	....	....	64	75	80	42	80	70	72	48	25	56	45	24	56	....
....	....	20	....	50	50	16	50	32	42	40	56	24	6	..	....	9	24	44	....
....	....	40	....	....	50	48	50	96	14	40	28	12	6	50	42	54	24	68	....

Table Showing the Relative Value of Varieties in

VARIETY NAME.	UPPER AUSTRAL.											
	Wood.	Ritchie.	Lewis.	Wirt.	Jackson.	Roane.	Calhoun.	Gilmer.	Braxton.	Mason.	Putnam.	Kanawha.
APPLE LIST—Continu d.												
CRABS. (<i>P. baccata</i>).												
Elgin .....	...	...	6	...	8	5	10	...	..	...	...	...
Hyslop	14	...	6	14	36	15	20	28	...	7	7	...
Spitzenburg .....	...	30	12	28	8	10	20	...	...	...	...	10
Transcendent	14	30	30	42	40	25	20	28	20	7	35	10
Whitney No. 20	28	10	6	...	4	...	20	...	...	...	...	...
COMMON APPLES (<i>P. malus</i>).												
Alexander	14	10	18	...	21	5	50	...	20	7	7	...
Arkansas (Mammoth Black Twig)	14	20	30	...	20	5	30	14	20	14	7	20
Autumn Swaar .....	...	...	...	28	...	...	...	...	...	...	...	10
Baldwin	56	20	72	70	56	70	50	42	60	63	7	10
Belmont .....	...	...	18	14	8	15	10	...	...	...	91	80
Ben Davis	70	60	78	98	88	85	80	84	100	77	49	60
Benoni	14	10	...	14	8	5	...	...	...	...	7	...
Bentley	14	...	...	14	8	10	30	...	...	...	7	10
Bethlehemite .....	...	...	...	...	4	...	...	...	...	...	...	10
Bevan .....	...	...	...	...	...	...	...	...	...	...	...	...
Black (Jersey) .....	...	...	...	...	8	5	10	14	...	...	...	10
Bonum .....	...	...	...	...	...	...	...	...	...	7	...	...
Bough, sweet	14	20	18	42	52	30	20	42	20	14	14	10
Bradford (Best Ky. Red) .....	...	...	...	...	12	5	10	...	...	7	...	10
Buckingham	14	...	...	...	4	10	10	...	...	7	...	20
Buncome (Red Winter Pearmaine)	42	20	12	14	28	40	...	56	40	21	21	40
Canada Reinette .....	...	...	...	...	4	...	...	...	...	...	...	...
Cannon (Pearmain) .....	...	...	...	...	8	5	...	...	...	...	7	...
Chenango .....	...	...	...	...	...	...	...	...	...	...	...	...
Clark Pearmain	14	...	...	...	...	5	...	...	...	...	...	...
Cooper	28	20	6	28	28	15	20	...	...	49	14	10
Cracking .....	...	...	...	...	...	...	...	...	...	...	...	...
Early Harvest	56	60	84	84	88	85	90	84	80	70	91	80
Early Joe	14	...	6	...	4	...	10	...	20	7	...	...
Early Strawberry	42	40	42	70	76	45	30	56	20	42	35	30
English Russet .....	...	20	30	28	20	40	30	42	20	7	28	30
Fallawater	42	30	78	70	60	60	30	56	60	42	35	30
Fall Jenneting .....	...	...	18	...	20	...	20	14	20	21	28	50
Fall Orange	1	...	6	...	4	...	...	84	...	...	14	10
Fall Pippin	42	40	66	84	68	65	90	42	80	42	63	40

the Life-Zones and Counties of the State—Continued.

UPPER AUSTRAL.																			
Clay.	Cabell.	Lincoln.	Wayne.	Logan.	Mingo.	Wyoming.	McIntosh, west half.	Mercer, east half.	Summers.	Fayette.	Monroe.	Greenbrier, east half.	Mineral, east two-thirds.	Grant, east half.	Pendleton.	Hampshire, N. E. one-third.	Morgan.	Berkeley.	Jefferson.
...	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	16	...	24	...	20	...	...	...	...	...	21	...	20	...	...	...	24	44	...
33	8	...	...	...	20	...	100	...	27	...	7	...	...	...	50	25	...	22	33
33	56	...	24	...	20	...	...	...	18	50	42	50	20	...	...	...	12	33	...
...	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
33	16	...	24	50	20	...	...	...	...	...	21	...	...	...	...	...	12	22	11
...	16	50	12	50	40	...	...	...	18	50	35	...	...	...	...	...	12	55	...
...	8	...	...	...	...	...	...	...	...	...	14	...	...	...	...	...	...	...	...
66	40	50	48	50	20	...	100	...	63	50	77	100	80	50	100	75	24	77	77
33	32	...	12	...	...	...	...	...	9	...	28	...	...	...	...	25	...	22	22
66	72	50	96	100	80	...	100	...	90	100	98	100	80	50	100	75	72	99	88
...	...	...	36	...	...	...	...	...	...	...	14	...	...	50	100	...	...	22	33
...	...	...	...	...	20	...	...	...	8	...	7	50	...	...	...	...	...	...	...
...
...	...	...	...	...	20	...	...	...	9	...	...	...	...	...	...	...	24	11	11
...	...	...	...	...	...	...	...	...	...	...	27	...	...	...	100	...	...	11	11
33	32	50	36	100	...	...	...	...	36	50	21	100	20	50	100	...	...	44	33
33	...	...	...	...	40	...	...	...	7	...	14	...	...	...	...	...	...	...	...
33	...	50	12	100	60	...	100	...	27	50	70	...	...	...	...	...	...	11	...
33	16	...	12	50	60	...	100	...	80	100	42	50	20	...	100	...	...	44	22
...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	8	...	2	...	...	...	...	...	27	...	7	...	...	...	...	...	...	33	11
...	8	...	...	...	...	...	...	...	...	...	14	...	...	...	...	...	...	11	...
...	...	...	...	...	...	...	...	...	27	...	...	...	20	...	...	...	...	...	...
...	40	...	...	...	20	...	...	...	...	...	14	...	...	...	...	...	...	11	...
...	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
66	88	50	96	50	100	...	100	...	81	100	91	100	60	50	100	70	60	99	77
...	8	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	12	11	...
33	80	...	48	...	20	...	...	...	...	50	21	50	60	50	50	...	...	77	44
33	24	...	...	...	40	...	...	...	...	...	28	...	40	...	50	50	...	44	55
66	56	50	48	100	40	...	100	...	81	100	91	100	60	50	100	75	48	88	77
...	32	...	24	...	40	...	...	...	9	...	21	...	40	...	100	50	...	22	33
...	...	...	...	...	...	...	...	...	9	...	14	...	...	...	...	25	...	...	...
66	80	50	60	50	80	...	100	...	54	100	56	100	60	50	100	75	24	99	77

Tables Showing the Relative Value of Varieties in

VARIETY NAME.	UPPER AUSTRAL.											
	Wood.	Ritchie.	Lewis.	Wirt.	Jackson.	Roane.	Calhoun.	Gilmer.	Braxton.	Mason.	Putnam.	Kanawha.
COMMON APPLES—Continued.												
Fall Wine	14	10	54	....	12	5	70	....	40	7	7	....
Fameuse	14	....	....	....	8	5	....	....	....	14	14	10
Fanny .....	....	....	....	....	....	....	....	....	....	7	7	....
Gano	14	....	....	28	8	....	10	....	....	14	7	....
Gilpin .....	....	....	....	....	....	10	....	....	....	....	....	....
Golden Sweet	14	40	36	28	64	55	40	42	60	42	49	30
Gravenstein .....	....	....	6	14	16	5	....	14	....	7	....	10
Green Cheese .....	....	....	....	....	....	5	....	....	....	....	7	....
Green Newtown .....	....	....	....	....	4	....	....	14	....	....	....	10
Grimes Golden (Native)	42	50	48	84	72	70	50	70	60	56	49	60
Haas (Fall Queen)	14	....	....	....	4	....	....	....	....	....	....	....
Hewes Crab	28	....	....	14	20	....	10	....	....	35	21	40
Higby .....	....	....	....	....	....	....	....	....	....	....	....	....
Highton Sweet	14	....	6	....	4	....	....	....	....	14	7	....
Horse .....	....	....	6	....	....	10	....	....	....	....	....	10
Hubbardston	28	15	....	....	20	10	....	....	....	14	14	....
Huntsman .....	....	....	....	....	....	....	....	....	....	7	....	....
Jersey Sweet	14	....	12	....	20	15	40	14	....	....	....	10
Jonathan	14	10	6	42	28	5	....	14	20	....	....	10
Junaluskee .....	....	....	....	....	....	....	....	....	....	....	....	....
Kent Beauty .....	....	....	....	....	....	5	....	14	....	....	....	....
Keswick .....	....	....	....	....	4	....	....	....	....	....	....	....
Kinnaid .....	....	....	....	....	....	....	....	....	....	....	....	....
Lansingburg .....	....	....	....	....	....	....	....	....	....	....	....	....
Lawver (Delaware Red Winter) ..	14	20	....	28	20	10	20	....	....	7	....	10
Limber Twig .....	....	10	30	28	28	45	20	14	60	35	35	60
McAfee .....	....	....	....	....	....	5	....	....	....	....	....	....
Maiden Blush	70	60	72	84	80	70	60	84	60	56	70	80
Mangum .....	....	....	....	....	....	....	....	....	....	....	....	....
Margaret (Early Red) .....	....	....	....	....	....	....	....	14	....	....	....	....
Moore Sweet .....	....	....	6	....	4	10	10	....	....	....	7	10
Munson .....	....	....	....	....	....	....	....	....	....	....	....	....
Nansemond	14	....	24	....	....	5	....	....	20	7	7	10
Nickajack	14	10	42	14	44	20	10	56	60	35	14	20
Northern Spy	56	50	66	98	84	60	70	70	80	70	35	40
Northwestern Greening .....	....	....	12	....	....	5	....	....	....	....	7	10
Oconee .....	....	10	....	....	....	....	....	....	....	....	....	....
Oldenburg, Duchess of	28	10	36	28	28	15	30	14	40	21	42	20

the Life-Zones and Counties of the State.

UPPER AUSTRAL.

Clay.	Cabell.	Lincoln.	Wayne.	Logan.	Mingo.	Wyoming.	McDowell, west half.	Mercer, east half.	Summers.	Fayette.	Monroe.	Greenbrier, east half.	Mineral, east two-thirds.	Grant, east half.	Pendleton.	Hampshire, N. E. one-third.	Morgan.	Berkeley.	Jefferson.
...	8	...	12	...	...	...	...	...	9	...	7	...	40	...	...	25	24	...	11
...	...	...	...	...	...	...	...	...	...	...	21	...	20	...	...	...	...	11	...
...	8	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...
...	8	...	...	...	...	...	...	...	9	...	14	...	...	...	...	...	...	55	...
...	...	...	...	...	...	...	...	...	...	...	14	...	...	...	...	...	...	...	...
66	40	...	24	50	40	...	...	...	14	100	77	100	80	50	100	...	48	55	...
...	8	50	12	...	20	...	100	...	22	...	21	...	...	50	100	...	12	83	38
...	8	...	...	...	...	...	...	...	15	50	14	...	...	...	50	...	...	...	55
...	16	...	...	...	...	...	...	...	9	...	7	...	20	...	50	...	12	22	...
33	80	5	60	50	60	...	100	...	27	100	77	100	40	...	...	...	36	99	33
...	24	...	12	...	20	...	...	...	...	...	21	...	...	...	...	...	...	22	77
...	24	...	...	...	20	...	...	...	...	...	...	...	...	...	...	...	...	22	...
...
...	8	...	36	50	...	...	100	...	...	...	21	...	20	...	...	...	...	...	...
...	...	...	12	...	...	...	...	...	...	...	14	100	...	...	...	...	...	...	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	...
...	16	...	...	...	...	...	...	...	9	...	7	50	20	...	...	...	...	11	...
...	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24	44	22
...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	16	...	...	...	...	...	...	...	9	...	14	...	...	...	...	...	...	11	...
...	...	...	12	...	...	...	...	...	...	...	14	...	...	...	...	...	...	...	...
...	...	...	...	...	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	8	...	...	50	20	...	100	...	...	50	28	...	20	...	...	...	...	22	11
66	56	50	36	50	60	...	...	...	81	...	56	100	20	...	...	50	12	33	77
...
66	88	50	96	50	80	...	...	...	72	50	70	50	60	50	100	75	24	99	66
...	...	...	...	...	...	...	...	...	...	...	14	...	...	...	...	...	...	...	...
...	...	...	...	...	20	...	...	...	...	...	...	...	...	...	...	...	...	11	11
...	8	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	...	22	11
...
...	16	...	...	...	...	...	...	...	45	...	21	...	20	...	100	...	...	33	33
33	32	50	...	50	60	...	100	...	36	100	49	...	...	...	...	...	...	11	11
33	64	50	84	56	60	...	100	...	63	50	84	100	80	50	100	50	36	88	66
...	...	...	...	...	...	...	100	...	...	50	7	...	...	...	...	...	...	22	...
...
66	24	...	36	...	40	...	...	...	36	50	42	50	40	...	...	...	24	55	22

Table Showing Relative Value of Varieties in

VARIETY NAME.	UPPER AUSTRAL.											
	Wood.	Ritchie.	Lewis.	Wirt.	Jackson.	Roane.	Calhoun.	Gilmer.	Braxton.	Mason.	Putnam.	Kanawha.
COMMON APPLES—Continued.												
White Pearmaine					8	5					7	
White Pippin	28	20			12	5		28		14	7	20
Willow Twig (native).	14	10	6	28	40	35	20			21	21	20
Wine Hays	14											
Winesap	42	60	66	70	72	65	80	84	80	56	56	50
Yellow Bellflowrr	56	60	66	70	56	60	80	56	40	56	77	60
Yellow June			54		8	5		28		7		10
Yellow Transparent	28	40	54	42	60	45	30		40	42	63	50
Yellow (New Town) Albe- marle Pippin	14	30	12	28	8				20	21		
York Imperial.	14	20	36	28	8	5	30	28		14	14	20

the Life-Zones and Counties of the State.—Continued.

UPPER AUSTRAL.

Clay.	Cabell.	Lincoln.	Wayne.	Logan.	Mingo.	Wyoming.	McDowell, west half.	Mercer, east half.	Summers.	Fayette.	Monroe.	Greenbrier, east half.	Mineral, east two-thirds.	Grant, east half.	Pendleton.	Hampshire, N.E. one-third.	Morgan.	Berkeley.	Jefferson.
33	...	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	12	11	11
...	8	...	...	...	...	...	...	...	...	...	35	100	20	...	...	25	...	44	11
...	16	50	12	...	20	...	...	...	...	...	14	50	20	...	...	...	24	11	33
...
66	72	50	60	100	80	100	...	...	81	50	70	...	40	50	100	50	36	88	77
66	56	50	60	50	60	...	...	...	36	100	91	100	60	50	100	25	12	66	55
...	16	...	12	50	20	100	...	...	18	...	7	...	20	...	100	25	12	33	22
...	72	50	72	50	60	...	...	...	54	100	42	100	60	50	...	25	36	66	44
...	16	50	12	...	20	100	...	...	27	50	49	...	20	...	...	75	12	44	88
33	24	...	12	50	40	...	...	...	18	50	70	50	60	50	...	50	48	99	77

BARBOUR COUNTY.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from	Varieties most exempt from scab.	Varieties which suffer most from scab.
Ohio Beauty	Ben Davis	Grindstone	Fallawater . . . . .	.....	Ben Davis	Wine Apple.
Rambo	Grimes Golden	Ben Davis	Red Astrachan . . . . .	.....	Grind stone.	
Early Harvest	Winter Russet	York Imperial, or Johnson's Fine Winter . . . . .		.....
Ben Davis	Grind Stone	Rome Beauty	Ben Davis.			
August Sweet	Baldwin	Baldwin	Grind Stone.			
Pumpkin Sweet	Fallawater	Pennock	Early Harvest.			
Northern Spy	York Imperial	Black Apple	Rambo			
Grimes Golden	Pennock	Grimes Golden	Spice Apple.			
Wine Apple	Golden Russet	Tompkins King	July Sweet.			
July Sweet	Tompkins King	Ladies' Blush	Waldower or Fallawater.			
Winesap	Red Astrachan . . . . .	.....	.....	
York Imperial	Twenty Ounce . . . . .	.....	Fall Wine Sap.			
Fallawater.		.....	Rome Beauty.			
Fall Wine.						
Red Astrachan						
Long Stem.						
Golden Blush						

The apple regions of Barbour county seem to lie in two areas of about equal extent, separated from one another by the Tygart's Valley river and its tributaries. The high lands of the county both east and west of the course of this river are reported as successful apple producing areas. The display of the county's fruit at the Philippi fair in the fall of 1899 was an emphatic corroboration of the suitability of the soil and climate to apple growing. The size, color, quality and variety of fruit displayed was enough to convince the most skeptical that orcharding could be made a profitable industry in the county. Our inquiry shows that the orchards bearing most regularly and abundantly occupy the hill sides or hill tops, and that the exposure is usually a southeasterly one.

BERKELEY COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Yellow Bellflower..	York Imperial.....	Ben Davis.....	Fallawater.....	.....	.....	White Pearmain.
Rambo.....	Ben Davis.....	Jonathan.....	Yellow Bellflower.	.....	.....	Fall Jenetling.
Baldwin.....	Jonathan.....	York Imperial....	Smokehouse.....	.....	.....	Early Harvest.
Spitzenburg.....	Winesap.....	New Town Pippin.	Vandevere.....	.....	.....	New Town Pippin.
York Imperial.....	New Town Pippin.	Nero.....	Pound Sweet.....	.....	.....	Romanite.
R. I. Greening.....	Carthouze.....	Stark.....	York Imperial....	.....	.....	Rambo.
Winesap.....	Red Astruchan....	Winesap.....	Ben Davis.....	.....	.....	Early Ripe.
Paradise.....	Baldwin.....	Carthouze.....	Early Harvest....	.....	.....	Grimes Golden.
Yellow Pippin.....	York Stripe.....	Green Pippin....	Carthouze.....	.....	.....	Pearmain.
Grimes Golden....	Mam. Black Twig.	Grindstone.....	Early Ripe.....	.....	.....	Greening.
Vandevere.....	Maiden Blush....	Smokehouse.....	Maiden Blush....	.....	.....	Northern Spy.
Gravenstein.....	Red Stripe.....	Grimes Golden....	Baldwin.....	.....	.....	Black Arkansas.
Smokehouse.....	Pound Pippin....	Baldwin.....	Fall Jenetling....	.....	.....	Missouri Keeper.
New Town Pippin.	Greening.....	Northern Spy....	Grimes Golden....	.....	.....
Early Strawberry.	Grimes Golden....	Black Twig.....	Tompkins King..	.....	.....
Yellow Transparent	Shackelford.....	Am. Blush.....		.....	.....
Pound Pippin.....	North western Greening.	Fall Jenetling..				
Jonathan.		Carlough Sweet.				
Arkansas Beauty.						

In no section of our State is apple culture given more attention than in Berkeley county. This section enjoys the advantage of being a part of the famous Albemarle Pippin region of Virginia, as well as sharing in the wonderful peach development of the sister State across the Potomac. In regard to soil and climate no other portion of the State is better adapted to fruit growing than the eastern counties of the State, of which Berkeley is one. Transportation facilities are good, and besides this, the one large commercial cold-storage house of the State which is devoted exclusively to the fruit business is located at Martinsburg. The range of hills extending in a northeast and southwest direction across the county, and known as the Apple-Pie Ridge, is the most famous orchard region of the State. The John Miller orchard, which caused so much newspaper discussion in the fall of 1897, is located upon this ridge. In fact, the horticultural growth of the county is largely the outcome of the successful efforts of W. S. Miller, who may justly be called pioneer horticulturist of West Virginia. From him have come a brood of successful, up-to-date orchardists, who are the guidn

spirits in the present rapid advancement of fruit growing in the Eastern Pan-Handle. Orcharding is given an important place among the pursuits of the county, and the acreage is increasing rapidly. The methods of culture, pruning and spraying practiced are kept well up with the advancements along such lines. The methods of harvesting and disposing of the fruit can be improved so as to bring a larger return to the producer. This will correct itself when the young orchards now being planted reach bearing age. While the present aggregate crop is large, the product of any individual orchard is not sufficient to justify the erection of special storerooms for holding the crop. At present the fruit is sold to buyers, sometimes at auction and sometimes at private sale. The grower in that case has no responsibility further than placing the fruit upon the car for shipment. While this guarantees a fair profit and a quick return, it does not always give the grower the greatest net return. Neither does it keep him interested in the crop from season to season, as does the practice of holding the fruit in store on the farm.

The class of varieties grown in the orchards of this region differ widely from those of the Ohio River region, yet each group is eminently suited to its particular environment. The soil of that part of the county in which apple growing is most extensively carried on is what is known as the "Martinsburg Shale." It is really a soil formed by the breaking down of a shale rich in iron, phosphorus, and potash. It is well drained naturally, and forms an ideal situation for the roots of fruit trees. This ridge of shale is flanked on the east as well as on the west by a soil rich in lime, and in many places there is a goodly admixture of the lime and shale. The apple does well upon these soils as well as upon those more largely composed of shale. The heavy soil containing lime and shale is also eminently suited to pear culture.

BOONE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pits or cellars in fit condition for April market.	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight	Varities most exempt from scab.	Varities which suffer most from scab.
Rambo..... Red Astrachan..... Pound Royal..... Summer Pearmain.	Ben Davis..... Virginia Greening..... Smokehouse..... Limber Twig..... Fall Wine.....	Russet..... Ben Davis..... Ralls Genet..... Limber Twig..... Nickajack.	Pound Royal. Rambo Ralls Genet. Vandevere.			

The soil and climate of Boone county are such as to make it a foremost fruit producing county. In fact, it now produces an abundant supply for home consumption. With railroad facilities the apple industry would undoubtedly quickly become an important commercial factor. Reports indicate that those portions of the county by the Coal and Little Coal rivers are well suited to apple culture. The valleys of these rivers are, however, less adapted to commercial apple culture than the high lands, as indicated on the map.

BRAXTON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most, regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Early Harvest.....	Ben Davis.....	Grindstone.....	Rome Beauty.....	Pound Royal....	Grindstone.	
Rambo.....	Rome Beauty.....	Ben Davis.....	Maiden Blush....	Northern Spy...	Rome Beauty.	
Pound Royal.....	York Imperial, or John's F.	Rome Beauty.....	Early Harvest....	Seek-no-Further	Never Fall.	
Russet.....	Winter.	York Imperial, or John's F.	Ohio Harvest....	.....	June Sweet.	
Yellow Transpar- ent.	Grimes Golden....	Winter.	Winesap.....	.....	Ben Davis.	
Rome Beauty.....	Black Apple.....	Pennock.....	Ben Davis	.....	
Smokehouse.....	Grindstone.....	Fallwater.....	Limber Twig.	.....	
Winesap.....	Rambo.....	Grimes Golden....	Rambo.	.....	
Ben Davis.....	Northern Spy....	Milam.....	Pennock.	.....	
Ogdenburg, Duch- ess of.	Wagner.....	Jeneting.....	Yellow Transpar- ent.	.....	
Limber Twig.....	Winter Pippin....	Salman's Sweet....	Northern Spy.	.....	
	R. I. Greening.....	.....			

The geographical position of Braxton county deprives it of one of the important natural factors which has so largely contributed to the upbuilding of horticultural industries in the counties along the Ohio and its navigable tributaries,—*i. e.*, cheap transportation. The limited mileage of railroad through the central counties of the state has a tendency to hold in check all horticultural development save that which caters to local demand only.

While Braxton may not become an important rival in apple culture for many years, she nevertheless possesses a soil and climate which renders the future development of a very considerable commercial orchard area possible.

Reports indicate that the whole of the county lying south of Elk River is well suited to apple culture. The contour of the country as well as its general elevation suggests equally as good areas north of the river, particularly in the southwest part along the Clay county line. While there are no commercial orchards reported, the fruit list indicates that the standard commercial sorts do well and that the present orchard area is sufficient to more than supply the home market.

BROOKE COUNTY.

ABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cullars in fit condition for April market.	Varieties which bear most evenly - underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Grindstone	Baldwin	Russet	Baldwin	Rambo.
Grimes Golden	Ben Davis	Ben Davis	Rambo	Baldwin	Northern Spy	Rome Beauty.
Baldwin	Stark	Roxbury Russet	Grimes Golden	Bongh, Sweet	Roxbury Russet	Balls Genet.
Northern Spy	Pearmain	Rome Beauty	Pound Royal	R. T. Greening	Rambo	R. T. Greening.
New Town Pippin	Baldwin	Stark	<i>New Town Pippin</i> .....	.....	Rome Beauty	Newtown Pippin
Maiden Blush	Willow Twig	Baldwin	<i>Golden Russet</i> .....	.....	.....	.....
Pamcuse	Grimes Golden	Pearmain, Winter	Maiden Blush .....	.....	.....	.....
Jonathan Rose	Rambo	Smith's Cider	Winter Pearmain .....	.....	.....	.....
Pound Royal	New Town Pippin	Red Romanite	Roxbury Russet .....	.....	.....	.....
Gravenstein	Bentley Sweet	Balls Genet.	Northern Spy .....	.....	.....	.....
Bongh, Sweet .....	.....	Rambo	Balls Genet. ....	.....	.....	.....

Brooke county is one of the four counties comprising that remarkable part of West Virginia which Penn left off his quadrangle in outlining Pennsylvania. Fortunately for West Virginia, we possess in that narrow neck of country one of our most important commercial horticultural centres as well as our most important market. Horticulture in order to thrive has to have certain stimulating influences, chief among which are proximity to good markets or adequate transportation facilities. Both these are enjoyed by the northern Panhandle counties of our State. The great industrial development along the Ohio river has built up many towns ranging in population from 200 to 2,000 people; they make large demands upon the neighborhood for both fruits and vegetables. These towns, together with Wheeling, the metropolis of the State, offer unusual inducements for truck and small fruit industries. The apple business, however, is not so much influenced by the local population as by transportation, and we shall see that the cheap means afforded by the Ohio river for getting apples to down stream points has undoubtedly had a marked influence on the development of the apple business in all the river counties. This, together with a congenial soil and climate makes the counties of Hancock, Brooke, Ohio, Marshall and those to the south along the Ohio river a veritable paradise for the apple grower. In Brooke county apples thrive well upon the hillsides as well as along the river front, yet the fine grazing offered by these strong lands have kept them well populated with sheep, and although there are a number of good commercial orchards in the county it is by no means one of the leading industries, as it is in Hancock county. As is described by the map, the whole county is adapted to apple culture, but the western portion is best suited to the commercial industry.

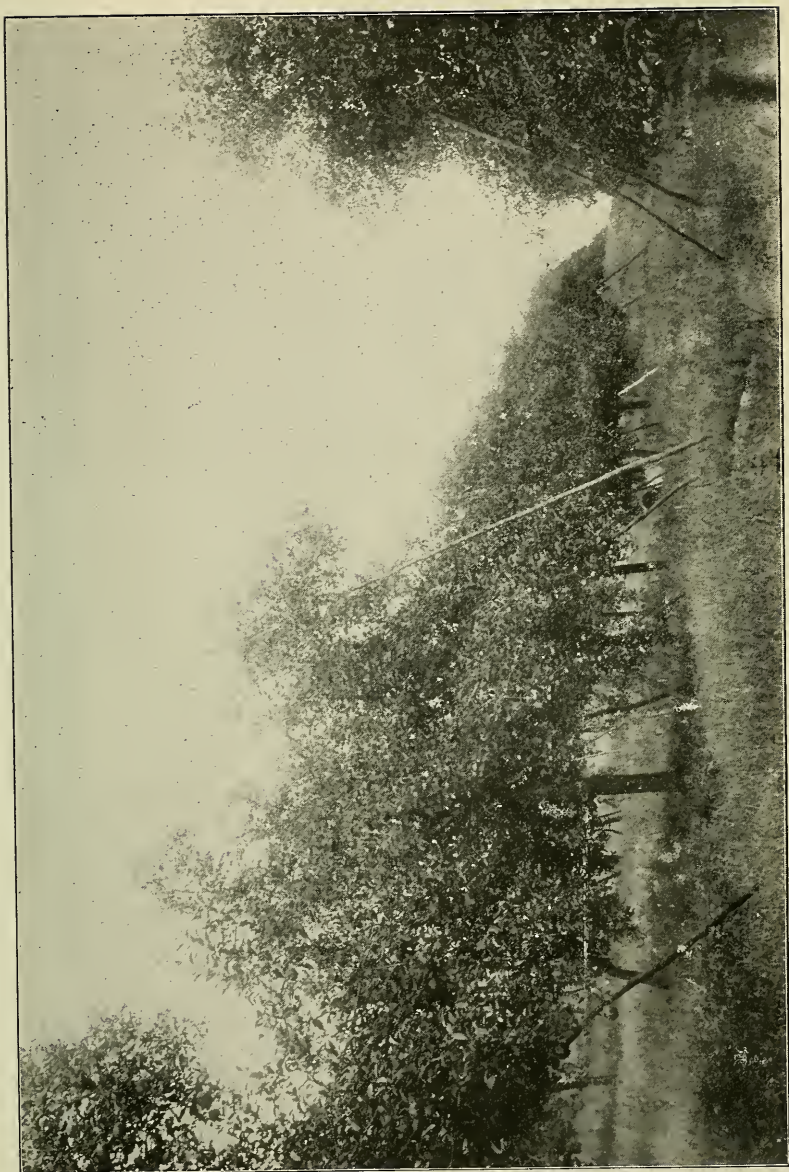


FIG. 9—ROME BEAUTY ORCHARD.

CABELL COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Pound Royal..... Early Harvest..... Rome Beauty.....	Rome Beauty..... Ben Davis..... York Imperial.....	Ben Davis..... Rome Beauty..... Grindstone.....	Early Chandler..... Pound Royal..... Ben Davis.....	Rome Beauty.....	Winesap..... Maiden Blush..... Yellow Transpar-ent.	Rome Beauty. Ben Davis. Golden Drop. Gano.
Ben Davis..... Smith's Cider..... Bethlehemite..... Roman Stem..... Maiden Blush..... Grimes Golden..... Fallwater..... Northern Spy.....	Grimes Golden..... Red Vandevere..... Maiden Blush..... Winter Pearmain..... Rambow..... Smith's Cider..... Winesap..... Nickajack.....	York Imperial..... Winter Pearmain..... Willow Twig..... Winesap..... Wealthy..... Baldwin.....	Smith's Cider..... Rome Beauty..... Nickajack..... Grimes Golden..... Winesap..... Maiden Blush..... Ralls Genet..... Yellow Transpar-ent.	.....	.....	.....
Bough, Sweet..... Yellow Transpar-ent.	Baldwin..... Yellow Transpar-ent.	..... Gano.....	Early Harvest. Gano.	.....	.....	.....
*Red Harman..... New Town Pippin..... Fanny..... Tetofsky..... Golden Sweet..... Early Strawberry..... Winter Pearmain..... Rambow.....	Pound Royal..... *Red Harman..... New Town Pippin..... Yellow Bellflower..... Russet.....	New Town Pippin..... R. I. Greening..... Smith's Cider..... Russet.....	Golden Drop. Chenango. Wagner. Kewick. Smith's Seedling. Fall Jenneting. Wealthy. York Imperial, or Johnson's Fine Winter. Bryan's Beauty. Winter Pearmain.	.....	.....	.....
Yellow Bellflower..... Russet..... York Imperial..... Pumpkin Sweet,— Pound Sweet. Cooper, or Lady Washington.	..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... .....	.....	.....	.....	*Local sorts.

Cabell county shares the reputation of her sister counties along the Ohio river, and has within her boundary twenty or more commercial orchards. The nearness to all down-river points and the facility afforded by the Ohio for reaching them, together with the freight traffic on the main line of the C. & O., afford the county unusually good transportation. Reports indicate that the best orchards are located on the more elevated portions of the county, and that practically the entire area, except the low river front, is adapted to orchard-planting. Commercial orchards are reported from the vicinity of Huntington, Union Ridge, and Green Bottom. The variety list here reported is quite extended and shows the large number of varieties held in high esteem as well as giving a wide choice to the prospective planter.

CALHOUN COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pits or cellar in fit condition for April market.	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Early Harvest..... Maiden Blush..... Fall Rambo..... Rome Beauty..... Golden Sweet..... Grimes Golden..... Yellow Bellflower..	Ben Davis..... Rome Beauty..... York Imperial..... Vandevere..... Baldwin..... Winesap..... Yellow Transparent Northern Spy..... Fall Pippin..... Waldower..... Alexander..... English Russet..... Gano..... Early Strawberry.. Peck's Pheasant..... Rambo..... Bentley..... Grindstone.	Grindstone..... Rome Beauty..... Ben Davis..... Spitzenburgh..... English Russet..... Winter Rambo..... Grimes Golden..... Alexander..... Gano..... Vandevere..... Bentley Sweet..... Romanite..... Northern Spy..... Pennock.....	Ben Davis..... Rome Beauty..... Early Harvest..... Fall Pippin..... Baldwin..... Grindstone..... Early Chandler..... Northern Spy..... Rambo..... Grimes Golden..... R. I. Greening..... Alexander..... Never-Fail..... Winesap..... Cooper.	Winesap..... English Russet.. Golden Sweet..... Maiden Blush... Wealthy..... Yellow Bellflower Stark..... June Eating..... Belmont..... Red Vandevere.. Rome Beauty	Ben Davis..... Rome Beauty..... Red Pippin..... Winesap..... Pound Sweet..... Grindstone..... Northern Spy..... Fall Pippin..... English Russet Maiden Blush	Red Vandevere Pennock Pumpkin Sweet

The only avenue by which the products of the county can reach the market without a long overland trip is the Little Kanawha river. The facilities offered by this stream are by no means sufficient to warrant growers in risking perishable products to it. This state of affairs precludes the possibility of profitable commercial orcharding. The county, however, reports the northern third as adapted to the industry while the water courses and the contour of the country indicate that there is also a likely section in the southwestern portion of the county as is shown by the red on the map. The varieties reported are among the best dessert and market sorts grown in the State, and with good railroads this county would undoubtedly soon be in the list of commercial apple growing counties.

CLAY COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pit or cellar in fit condition for April market.	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Vandevere..... Twenty Ounce.....	Ben Davis..... Rome Beauty.....	Ben Davis..... Rome Beauty.....	Limber Twig..... Ben Davis.....	Vandevere..... Ben Davis.....	Yellow Bellflower Yellow Transpa- rent.	Vandevere. Ben Davis.
Rome Beauty.....	Romanite.....	Romanite.....	Yellow Transpa- rent.	Limber Twig.....	Twenty Ounce...	Limber Twig.
Yellow Bellflower.. Wealthy..... Ben Davis..... Fallawater..... Rambo.....	Abram..... Limber Twig..... Green Russet..... Winter Sweet..... Siberian Crab. Grindstone.	Green Russet..... Abram..... Siberian Crab..... Siberian Crab.....	Rome Beauty..... Fall Pippin..... Vandevere..... Maiden Blush.	Rome Beauty..... Baldwin..... Golden Sweet.	Rambo..... Rome Beauty.	Rome Beauty.

Reports from Clay indicate that practically the whole county is more or less suited to apple culture. A topographic survey, however, would indicate that the areas covered by the red on the map will prove best suited to this industry. Commercial orcharding in the county is at present only in its infancy, as railroad facilities are only afforded through the western half of the county. With the extension of the West Virginia Central Railroad the remainder of the county will be afforded shipping facilities which will undoubtedly develop more or less of a commercial orchard industry. The standard commercial sorts are reported as doing well, and with modern methods certain portions of the county, if not the whole, should grow profitable orchards.

DODDRIDGE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Rome Beauty..... Golden Pippin..... Fallawater..... Porter.....	Rome Beauty..... Ben Davis..... Baldwin..... Grimes Golden or Golden Pippin..... Maiden Blush..... Rambo..... Russet..... Shannon..... Black (Jersey)..... Yellow Bellflower.....	Grindstone..... Ben Davis..... Rome Beauty..... Ralls Genet..... York Imperial..... Romanite..... Bentley Sweet..... Winesap..... Winter Russet..... Baldwin..... Nanson Beauty..... Missouri Pippin.....	<i>Rome Beauty</i> Porter..... White Long Island..... R. I. Greening..... Ben Davis..... Rambo..... Yellow Bellflower..... Early Harvest..... Baldwin..... Fallawater..... Shannon Pippin..... Grindstone..... Black (Jersey)..... Greening.....	Pennock..... Roman Beauty..... Baldwin..... Rambo..... Early Harvest..... Sweet Russet.....	Rome Beauty..... Ben Davis..... Rambo.....	Limber Twig. Willow Twig.
Northern Spy..... Early Harvest..... Golden Sweet..... Roxbury..... Baldwin..... Fall Rambo..... Winter Russet..... Lowell..... Early Bow.....						

The commercial apple development in this county has already reached a point of marked importance, and although the outlet for the fruit is only afforded by rail yet the Parkersburg branch of the B. & O. offers ample shipping facilities. Although the crop for 1898 was a loss because of the late heavy freezes of that year, there are in general few losses from such causes. The industry has already passed the experimental stage and may be considered as established. As indicated upon the map, reports show the whole county to be suited to apple culture. The contour would indicate that the extreme western border may be found to be somewhat less adapted to the industry than the remainder of the county. This, however, may not prove to be the fact in practice. The sorts reported show sufficient variety to suit the most exacting taste as well as including a good selection for market.

FAYETTE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Porter..... Rambo..... Grimes Golden..... Winesap..... Oldenburg, Duchess of..... Yellow Transpar-ent..... Northern Spy.....	Ben Davis..... Rome Beauty..... York Imperial..... Vandevere..... Maiden Blush..... Red Astrachan..... Yellow Transpar-ent.....	Ben Davis..... Rome Beauty..... York Imperial..... New Town Pippin..... Rall's Genet..... Nickajack..... Milam.....	<i>Fallawater</i> <i>Porter</i> <i>Milam</i> <i>Rambo</i> <i>Winesap</i> <i>Ben Davis</i> <i>Northern Spy</i>	Milam..... Twenty Onnce.....	Fallawater..... Grimes Golden..... Rambo..... Porter..... Winesap.....	Rome Beauty. Early Ripe. Early Harvest. New Town Pip. Winesap.
Pearmain..... Rome Beauty..... Early Ripe..... Early Harvest..... Vandevere..... Yellow Bellflower.. R. I. Greening..... Golden Sweet. Maiden Blush. Famuese.	Rambo..... Wealthy..... Winesap..... Green Cheese..... Never Fail..... Royal Pearmain..... R. I. Greening..... Oldenburg, Duch-ess of.	N. W. Greening..... Winesap..... Green Cheese..... Never Fail..... Lumber Twig..... R. I. Greening.....	<i>Rome Beauty</i> <i>Red Astrachan</i> Early Harvest. Lumber Twig. Oldenburg, Duch-ess. Rall's Genet. Wealthy.	.....	.....	.....

Fayette county, containing, as it does, large areas of coal, together with both rail and water transportation, possesses not only facilities for readily reaching the city markets of both the east and the west, but good local markets as a result of the mining operations. While at present there are few orchards planted for commercial purposes there is a very considerable overplus from the farm orchards which finds a ready market in the mining towns. The county is intersected in an irregular fashion by the Kanawha river, and the portion east of this river is reported as the most favorable for orcharding. The position and contour of the hills in the southern portion of the county have led me to color that part red as indicating possible orchard areas. It will be noted that the list of market fruits contains the long keeping sorts grown in the State, as well as the early summer and fall sorts, indicating that there is a demand for apples from the beginning of the season to its close. Such a demand creates a special and usually a very profitable sort of commercial orcharding, and the fruit growers of Fayette county are to be congratulated on possessing such advantages.

GILMER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Grimes Golden. Glenville Sweet. Rome Beauty. Benoni. York Imperial. Rambo. Early Harvest. Red Winter Pearmain.	Ben Davis. Rome Beauty. York Imperial. Stark. Grimes Golden. Winter Winesap. Baldwin. Maiden Blush.	Grindstone. Ben Davis. Rome Beauty. York Imperial. Rall's Genet. Fallwater. R. I. Greening. Romanite.	Rome Beauty. Ben Davis. Grimes Golden. York Imperial. Rall's Genet. Glenville Sweet. Maiden Blush. Grindstone.	Fallwater. Glenville Sweet. Pound Royal. Baldwin. Grindstone. Ben Davis. World's Wonder Mann.	York Imperial. Glenville Sweet. Rome Beauty. Pound Sweet. Grindstone. Ben Davis. World's Wonder Mann.	Romanite. Pennock. Early Harvest. Nickajack. Never Fail. Yellow Bellflower
July Sweet. Winesap. Pawpaw. Early Golden Sweet. Fay's Russet. Early Strawberry. Maiden Blush. Pound Sweet.	Black Twig. New Town Pippin. Nickajack. Grindstone. Russet. Golden Russet. R. I. Greening. Arkansas—Mam. Yellow Bellflower.	Winesap. Nickajack. Russet. Never Fail. Winter Pearmain. Grimes Golden. Green Pippin.	Russet. Mann. Rambo. R. I. Greening. Golden Russet. Never Fail. Early Strawberry. New Town Pippin. Pawpaw. Nickajack.	..... ..... ..... ..... ..... ..... ..... ..... ..... .....	Early Harvest. Pawpaw. Maiden Blush.	

The apple industry in Gilmer county must at present be confined to the home demand. The county has no railroad or navigable watercourse by which the products of the orchard could be carried to market. The farm orchards are sufficient to supply the local demand, and unless some unusual condition prevails, as during the spring of 1898, the trees bear regularly. While no reports on orchard location were received from residents of the county, I am led to suggest the northern portion, colored red on the map, as a likely apple region. This may not prove to be the best apple region of the county when put to actual test, but it is the portion the water-sheds indicates as most likely. The fruit list also suggests that a large and well selected collection of apples are well suited to this region.]

GRANT COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Baldwin..... Vandevere..... Yellow Transparent Fallawater..... Rambo..... Red June..... Early Harvest..... Northern Spy..... Tompkins King..... Wagner..... Wine Sap..... Early Strawberry.. Smokehouse..... Yellow Bellflower	York Imperial.... Ben Davis..... Stark..... Baldwin..... Spitzenburgh.... Rall's Genet..... Fallawater..... Wine Sap..... Northern Spy..... Red Astrachan.... Yellow Bellflower. Yellow June.....	Ben Davis..... York Imperial.... Rome Beauty.... Rall's Genet..... Stark..... Mann..... Walbridge..... Edgar Red Streak. Baldwin..... Wine Sap..... Alexander..... Fallawater..... Vandevere.....	Rall's Genet..... Roxbury Russet York Imperial Smokehouse Fallawater Spitzenburgh Vandevere Baldwin. Red Astrachan	..... ..... .....	Vandevere	

Stock raising is one of the chief pursuits of the residents of Grant county for account of its well turfed hills and valleys and again because of lack of railroad facilities for the great portion of the county. The northern portion of the county is tributary to the main line of the W. Va. Central, but as yet no commercial fruit industry has become established. The county undoubtedly contains areas well adapted to the culture of apples, grapes and peaches, and if shipping facilities become available for these localities some one will certainly discover their suitability for the fruit industry. The fruit list is certainly encouraging, for it contains all the valuable commercial fruits of the eastern part of the state.

GREENBRIER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear uniformly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Red June	York Imperial	Grindstone	Yellow Transparent.	Pound Royal....	York Imperial.	
Golden Sweet.....	Ben Davis.....	Ben Davis	York Imperial..	Fallowater	Seek-no-Further.	
Porter.....	Grimes Golden....	York Imperial....	Seek-no-Further..	Red Astrachan..	Wealthy.	
Smokehouse.....	Baldwin.....	Rail's Genet.....	Baldwin	R. I. Greening...	Mann.	
Grimes Golden....	Yellow Bellflower.	Red Pearmain....	Smokehouse.....	Early Harvest....	Yellow Transparent.	
Rambo.....	Milam.....	Mann.....	<i>Ben Davis.</i>			
Tompkins King....	New Town Pippin.	Winter Pippin	White Pippin.			
Fallowater.....	.....	.....	Fallowater.			
New Town Pippin.	.....	.....	Rambo.			
Seek-no-Further....	.....	.....	Pound Royal.			
Rome Beauty.	.....	.....		
Pound Royal.	.....	.....		

Two commercial orchards are reported from the county. In general there is a good supply of fruit grown for home use. The soil and climate of the county of Greenbrier are such that commercial apple growing should be a remunerative industry as soon as sufficient transportation facilities become available. At present such an industry must be confined to regions tributary to the line of the C. & O. R. R., but it often happens, as in the case of Greenbrier county, that much of the best fruit area is too remote to be developed in a commercial way. The map shows two regions in which apples may be grown with profit. In addition to these areas it appears that in the northeastern corner of the county possesses an area well adapted for the growth of both apples and peaches. The portion west of the Greenbrier river should be extended to include the territory drained by the headwaters of Muddy creek, north of a line extending from Clintonville through Dawson, and including the area south of the Meadow river and Big Clear creek. In the vicinity of Nuttersville the Nicholas county apple region extends over into Greenbrier somewhat in the fashion indicated by the red on the map. The soil which is best suited to fruit growing in the county is quite well and sharply defined by saying that it lies between the blue grass (limestone) and the sand, and consists chiefly of a red gravel, the result of the breaking down of the underlying shale rock. One would naturally expect to find in this section localities well suited to the cultivation of the New Town or Albemarle Pippin, and I am informed that in the neighborhood of Richlands this most excellent variety is grown with good success.

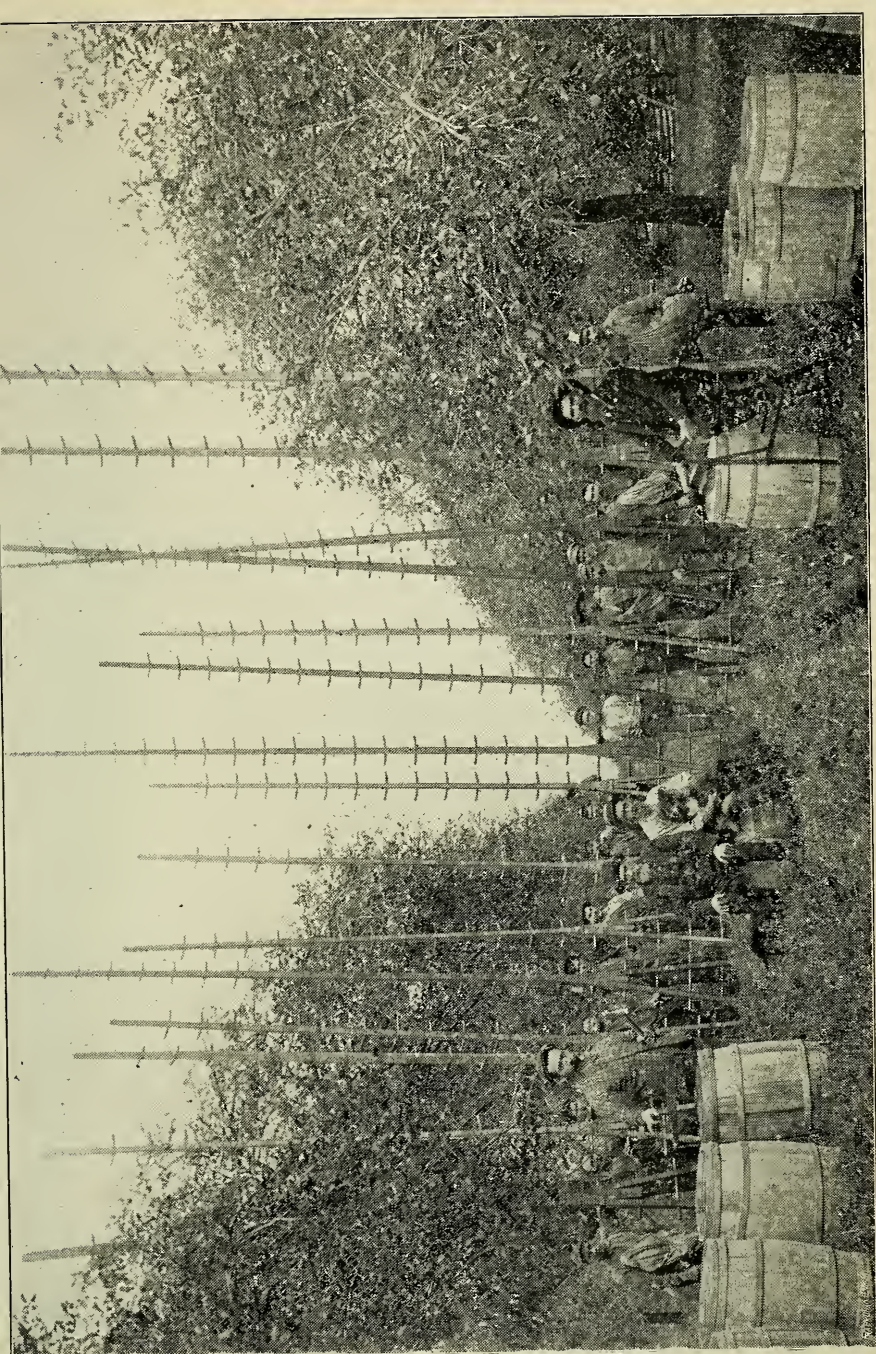


FIG. 10.—A Group of Apple Pickers at Wm. F. and R. Brown's, Hancock Co., W. Va.

HAMPSHIRE COUNTY.

APPLE CULTURE.

129

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Winesap.....	York Imperial....	Grindstone.	Ben Davis.....	Arkansas.....	.....	Summer Rose.
Maiden Blush.....	Ben Davis.....	Ben Davis.....	Rall's Genet.....	Rough Sweet.....	.....	Fall Wine.
Rambo.....	New Town Pippin	York Imperial....	<i>Fall Orange</i>	Vandevere.....	.....	Stark.
Fallawater.....	Baldwin.....	New Town Pippin	Smokehouse.....	Elgin Pippin.....	.....
Early Harvest.....	Northern Spy.....	R. I. Greening.....	<i>New Town Pippin</i> .			
York Imperial.....	Red Astrachan....	Northern Spy.....	Pound Royal.....			
Smokehouse.....	R. I. Greening.....	Red Astrachan....				
Yellow Pippin.....	Fallawater.....	Baldwin.....				
Rall's Genet.....	Johnson's F. Winter.	Eng. Red Streak.				
	Grindstone.....	Wine Sap.....				
	Russet.....	Rambo.....				
	Rambo.....	Golden Sweet.				
	Early Transparent.	Fallawater.....				
	Maiden Blush.....	Lumber Twig.....				
	Pumpkin Sweet.					

Hampshire county being chiefly made up of the valleys of the tributaries of the Potomac and the ridges separating them, presents many localities in which the orchard industry might be expected to gain a ready foot hold and thrive; this is more true of the peach than the apple industry, although there are many family orchards producing apples of high quality. The predominance of the Romney shade, which is so eminently suited to peaches, along the sides of the mountains has fostered the development of this industry in those sections where shipping facilities were afforded. The bearing of transportation upon the success or failure of the fruit industry in any locality is brought out in Hampshire as no where else in our state. The Alleghany Orchard Co. owns about 50,000 peach trees in this county, the product of which must be shipped over a spur of the B. & O. before it reaches the main line. The cost of marketing the product of this orchard in 1897 was some \$2,000 more than that for an orchard of over 60,000 trees only about 12 miles distant, the product of which was placed on the main line direct. I am informed by the owners that this industry is to be abandoned, simply because the cost of transportation over this stub road takes off any margin of profit which the orchard might otherwise pay. Such experiences as this will have a tendency to force our fruit industries to the main lines of R. R. and will discourage possible development in regions remote from main thoroughfares and dependent upon branch roads.

Although located at the extreme north end of the Northern Pan-Handle and one of the smallest counties of the State, Hancock has no rival in this or any other State, in the intensity of its apple industry. It does not possess as great an acreage as Berkeley county, yet the area in which orcharding is practiced produces more apples than any area of equal size in the State. The original plantings were almost exclusively confined to the hillside where the soil is as a rule a sandy clay loam, but of late the industry has crept down and is now fast encroaching upon the sandy terrace of the river bottom. In fact some of the largest orchards are located upon the higher portions of this bottom land. The orchards of this region have been remarkably free from disease up to the present time. The cod-lin moth has been the chief enemy, but the arsenical sprays have come into general use and its ravages are successfully held in check. The chief particular in which the apple industry of Hancock excels all others in the State, is the complete way in which the growers have prepared themselves to overcome the exigencies of the market. We find here the most complete system of harvesting and storing fruit practiced in eastern U. S. The growers purchase their packages in the plat, employ coopers and set up the barrels on the farm. The fruit is picked so much per barrel, it is inspected, headed and taken at once to the storehouse where it is held either in cold storage chambers or in apple ware rooms until the markets warrant shipment, which is usually during March and April. Such an industry is dependent exclusively upon long keeping sorts. The accompanying Figure 10, reproduced from Bull. 54, of this station, shows a familiar picking scene, and Fig. 12 shows one of the cold storage houses, while Fig. 13 is a recently erected warehouse. While the list of fruit includes a large collection of staple market and table sorts, little attention is given to sorts outside the following: Willow, Ben Davis, Rome Beauty, Bentley Sweet, and Maiden Blush, the last named being the only summer or fall sort receiving special attention. Diseases have made their presence felt in two or three orchards during the last 3 years and the growers must be on the alert for a serious and general outbreak of both the *Apple Scab* and the Bitter Rot, mention of which is made in Bull. 65 of this Station. With care in this matter and more attention to culture and fertilization this section will undoubtedly maintain the proud position it now holds.

HARDY COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo.....	York Imperial.....	Grindstone.....	Smokehouse.			
Bellflower.....	Ben Davis.....	Ben Davis.				
Smokehouse.....	Rome Beauty.....	York Imperial.				
Hubbardston.....	Romanite.....	Romanite.				
Romanite.....	Fallowater.....	Rall's Genet.				

Hardy county undoubtedly possesses many of the advantages of soil and climate which have brought wealth and fame to certain counties of the mother State, but because of lack of facilities for reaching the markets of the world the apple industry must remain undeveloped. The whole county is reported as well adapted to apple growing, but a more conservative idea has led me to outline two districts which a topographic and soil survey suggest as best suited to the industry. These areas are colored red on the map.

HARRISON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo.....	Ben Davis.....	Ben Davis	Rome Beauty.....	New Town Pippin	Ben Davis.....	Bentley Sweet.
Early Harvest.....	Rome Beauty	Rome Beauty	Ben Davis.....	Winesap.....	Trader's Fancy..	Roxbury Russet.
Grimes Golden.....	Grindstone.....	Grindstone.....	Grimes Golden...	Munson.....	Yellow Bellflower	R. I. Greening.
Northern Spy.....	Baldwin.....	Romanite.....	Ralls Genet.....	Domine.....	Northern Spy...	Waldour.
Rome Beauty.....	Winesap.....	Rall's Genet.....	Early Harvest...	Rome Beauty...	Fallowater.....	Limber Twig.
Maiden Blush.....	Romanite.....	Winesap.....	Romanite.....	Bentley Sweet...	Grimes Golden...	Rall's Genet.
Winesap.....	Spitzenburgh.....	York Imperial...	Winesap.....	Pound Royal....	Peck's Pleasant..	New Town Pippin.
Pound Royal.....	Grimes Golden...	Spitzenburgh.....	Spitzenburgh.....	Early Strawberry	York Imperial...	Rome Beauty.
Baldwin.....	Langford Seedling	Grimes Golden...	Clayton.....	Red Astrachan...	Summer Rose...	Rock Remain.
Yellow Bellflower..	Stark.....	Limber Twig	Baldwin.....	Early Harvest...	Yellow Transparent.	Romanite.
Stark.....	White Pippin.....	Tompkins King...	Roman, Stem.....	R. I. Greening...	R. I. Greening...	Yellow Bellflower
Waldour.....	Northern Spy...	Buncombe, Red Winter Pearnain.	York Imperial....	Roxbury Russet.	English Russet...	Pewaukee.
Mayapple Pippin..	Maiden Blush	Roxbury Russet...	Smokehouse.....	Pearmain.....	.....	Hightop Sweet.
Seck-no-Further....	Lawver—Delaware	Red Pearnain...	Rambo.....	Bough, Sweet.	.....	.....
Bough, Sweet.....	Red Winter.....	Walbridge, Edgar.	Yellow Transparent.	Fallowater.	.....	.....
Early Strawberry..	Black (Jersey).....	Red Streak	Rock Remain	Romanite.	.....	.....
Smokehouse.....	Grindstone.....	Lawver—Delaware	Wagener.....	.....	.....	.....
Yellow Pippin.....	Jonathan.....	Red Winter.....	Northern Spy...	.....	.....	.....
Vandevere.....	Red Astrachan....	Rock Remain.....	Vandevere.....	.....	.....	.....
Bentley.....	New Town Pippin	Pannock.....	R. I. Greening...	.....	.....	.....
Black (Jersey).....	Tompkins King....	Vandevere.....	Seck-no-Further.	.....	.....	.....
Black (Jersey).....	Roxbury Russet...	Baldwin.....	Lake.....	.....	.....	.....
Winter Rambo.....	Winter Rambo....	Winter Rambo....	Langford Seedling	.....	.....	.....
Fall Rambo.....	Maryland Beauty..	Seck-no-Further...	Maiden Blush...	.....	.....	.....
Mt. Lookout Sweet.	Trader's Fancy.....	Stark.....	Johnson's Fine Winter	.....	.....	.....
Arkansas—Mam'th Black Twig.	Wagener	Arkansas—Mam'th Black Twig.	Limber Twig.	.....	.....	.....

I. Greening.....	Yellow Bellflower..	Willow Twig.....	Fall Rambo.
Fall Wine.....	Arkansas—Mam'h	Trader's Fancy....	Smith's Cider.
	Black Twig.		
Golden Sweet.....	Early Harvest.....	Peck's Pleasant....	Nansmond.
Oldenburg, Duchess	Smith's Cider.....	Malden Blush.....	Bough, Sweet.
of.			
White Pearmain....	Fallwater.....	New Town Pippin.	Roxbury Russet.
Peck's Pleasant....	Bentley Sweet.....	Mam't.....	Pennock.
Limber Twig.....	.....	Smith's Cider.	
Pennock.			

According to the map, Harrison county possesses east of the West Fork river a region well suited to apple culture, but as would appear from the red area on the map the greater part of the county may be looked upon as a likely apple region. This is emphasized because the county is intersected in both directions by railroads having their junction at Clarksburg. By these roads the county is afforded exceptional advantages for transportation. This together with the very excellent and extended list of varieties reported would suggest remarkable future possibilities for this county in the way of fruit growing. Another advantage, possessed by only a few counties of the State, is a good home nursery. Home grown trees are always to be preferred to imported ones, and the Southern nursery at Clarksburg can and should form a nucleus for a large fruit industry in the county.

JACKSON COUNTY.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Early Harvest.	Rome Beauty.	Ben Davis.	<i>Rome Beauty</i>	Lady Sweet.	Early Harvest.	Cathend.
Rambo.	Ben Davis.	Rome Beauty.	<i>Ben Davis</i>	Red Detroit.	Rome Beauty.	Leather Coat.
Grimes Golden.	Grindstone.	Grindstone.	Early Harvest.	Sheep Noses.	Ben Davis.	Rome Beauty.
Rome Beauty.	Northern Spy.	Winesap.	Rambo.	Rambo.	Limber Twig.	
Maiden Blush.	Stark.	Stark.	<i>Golden Sweet</i>	Fall Janneting.	Wealthy.	
Golden Sweet.	Grimes Golden.	Red Romanite.	Smith's Cider.	Early Strawberry.	Pound Royal.	
Red June.	York Imperial.	Northern Spy.	Maiden Blush.	Roman Beauty.	Early Harvest.	
Moore's Extra.	Maiden Blush.	Grimes Golden.	Gavenstein.	Romanite.	Rambo.	
Rambo, Winter.	Winter Pearmaine	Smith's Cider.	<i>Yellow Transparent</i>	Twenty - Ounce Pippin.	Grimes Golden.	
	Nickajack.	World Wonder.	<i>Winesap</i>	Northern Spy.	Golden Sweet.	
Jonathan.	Winesap.	Nickajack.	Baldwin.	R. I. Greening.	Benoni.	
Fallwater.	Vandevere.	Trader's Fancy.	Fallwater.	Never Fall.		
Fall Wine.	Baldwin.	Winter Pearmaine	Red Romanite.	Fall Wilton.		
Trader's Fancy.	Gano.	Indian.	Red Vandevere.	Willow Twig.		
Early Adams.	Wealthy.	Baldwin.	Bentley Sweet.	Cooper.		
Pumpkin Sweet.	White Pippin.	Gano.	Fall Pippin.	Golden Russet.		
Early Strawberry.	Early Harvest.	English Russet.	Pumpkin Sweet.	Fallwater.		
White Pippin.	Rambo.	Bentley Sweet.	<i>Rock Remain</i>	Buncome Red Winter.		
	Cooper.	Winter Chandler.	Grimes Golden.	Pearmaine.		
Cooler Early White.	Winter Chandler.	Walbridge.	Willow Twig.	Nickajack.		
August Sweet.		Sawyer Red Pippin.	Fall Janneting.			
Bough Sweet.	Fallwater.	Rock Remain.	Stark.			
Fall Pippin.	Green Pippin.	Fall Janneting.	Golden Pippin.			
Pound Sweet.	Mann Apple.	Winter Russet.	Northern Spy.			
Smith's Cider.	Winter Rambo.	Willow Twig.	Mann Apple			
Northern Spy.	Improved Grindstone.					
R. I. Greening.	Red Astrachan.	Green Pippin.	Log Cabin.			
Limber Twig.	Winter Strawberry	Flat Graft.	Gray Pearmaine.			
Yellow Bellflower.	Blue Pearmaine.	Log Cabin.	Winter Strawberry			
Green Pippin.	English Russet.	Mann Apple.	Early Ripe.			

Winesap.....	Never Fail.....	Winter Rambo.....	Shockley.....
Seek-no-Further..	Golden Russet.....	Carlough.....	Emperor of Russia.
Fall Jennesing.....	Lawver.....	Limber Twig.....	White Pippin.
Waldour.....	.....	Romanite.....	Yellow Bellflower.
Pound Royal.....	.....	Winter Strawberry	Romanite.
Bentley Sweet.....	.....	Bough Sweet.....	Fall Willow.
Early Ripe.....	.....	Never Fail.....	Yellow Russian.
Lowell.....	.....	Golden Russet....	Winter Rambo.
New Town Pippin..	.....	Ralls Genet.....	Golden Russet.
Mann Apple.....	.....	.....	Never Fail.
Summer Sweet.....	.....	.....	Grindstone.
Baldwin.....	.....	.....	.....
Fall Willow.....	.....	.....	.....
English Rambo.	.....	.....	.....
Golden Russet.	.....	.....	.....
Early Sweet.	.....	.....	.....
Winter Rambo.	.....	.....	.....
Golden Pippin..	.....	.....	.....

A very active interest in orcharding is manifested in Jackson county in general, This is limited to the home orchard, but there are also a number of commercial plantations. The county possesses a considerable frontage along the Ohio river, which always makes the hills bordering the bottom lands well adapted to apple growing. The areas marked with the black cross-hatching are those especially mentioned as suitable to orcharding. In addition to the red and black lining, I think it safe to say that a belt parallel to the Ohio and off the bottom lands will be shown to be well suited to the cultivation of the Rome Beauty and Ben Davis. The large list of varieties reported is proof of the interest in this branch of fruit growing. This, together with good railroads and waterways, make a very extensive commercial fruit development possible.

WEST VIRGINIA EXPERIMENT STATION.

JEFFERSON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Belmont.....	Ben Davis.....	Grindstone.....	<i>Ben Davis</i>	Willow Twig.....	Ben Davis.....	Willow Twig.
Rambo.....	York Imperial....	Ben Davis.....	<i>York Imperial</i>	New Town Pippin.....	Stark.....	New Town Pippin.
New Town Pippin.	New Town Pippin.	New Town Pippin.	<i>Winesap</i>	Belmont.....	Bentley Sweet....	Rome Beauty.
Baldwin.....	Stark.....	York Imperial....	<i>Grimes Golden</i>	Lawver—D e l a-	Northern Spy....	Winesap.
Maiden Blush.....	Winesap.....	Rome Beauty.....	Willow Twig.....	ware Red Winter	York Imperial..	Lawver —D e l a-
Grimes Golden.....	Willow Twig.....	Willow Twig.....	Bentley Sweet....	Smith's Cider....	W e a t h y	ware Red Winter
Fallowater.....	Rome Beauty.....	Stark.....	Maiden Blush....	Winesap.....	York Stripes.	
Rome Beauty.....	Bentley Sweet....	Bentley Sweet....	Ralls Genet.....	Rome Beauty....	Maiden Blush.	
Domine.....	Gravenstein.....	Winesap.....	Rome Beauty.....	Rambo.....		
Sweet Winter Paradise.	York Stripes.....	Ralls Genet.....	Early Harvest....	Yellow Bellflower.		
Early Strawberry.	Lumber Twig.....	Russet.....	New Town Pippin.			
Ben Davis.....	Twenty-Ounce....	Lumber Twig.....	Red Astrachan.			
Mammoth.....	English Rambo....	Pippin.....	<i>York Stripes</i>			
English Rambo....	Winesap.....	Roxbury Russet..	<i>Summer Queen</i>			
Winesap.....	Lumber Twig.....	Fallowater.....	<i>Lumber Twig</i>			
Lumber Twig.....	Early Harvest....	Northern Spy.....	Baldwin.....			
Yellow Transparent.			Spitzenburgh.....			
Benoni.....			Smokehouse.....			
Red Astrachan....			Pound Royal.....			
Smokehouse.....			Rambo.....			
Peck's Pleasant....			Summer Pearmain			

Jefferson county possesses soils so well suited to wheat growing and to general agriculture that the fruit business has been somewhat tardy in its development as compared with that of Berkeley. During the last three years, and particularly during the year of 1899, the planting of apple orchards has become quite a fad in the county, and the acreage, in consequence, has been greatly increased. The narrow belt of country bordering the State of Maryland and east of the Shenandoah river is remarkable for the fruit prospects which it

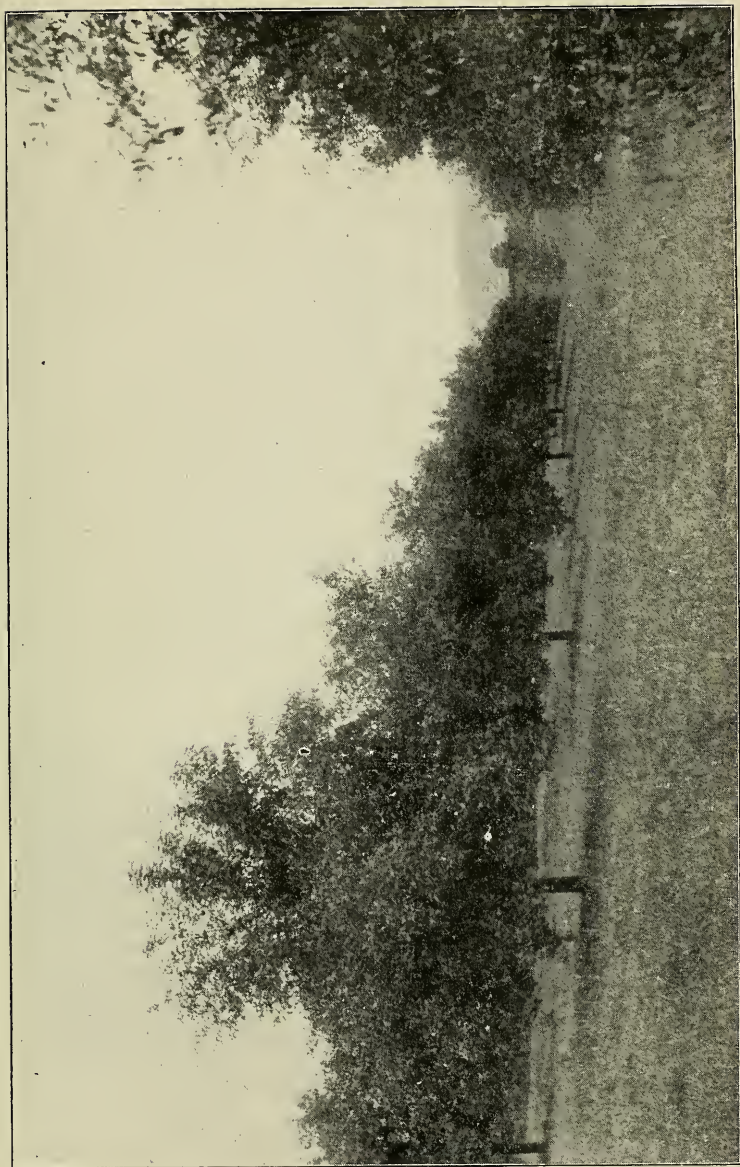


FIG. 11—WILLOW ORCHARD.

the western portion of the county shares the good fortune of Berkeley in having a narrow belt of the shale of the famous "Apple-Pie Ridge" in direction parallel to the county line from where the Opequan creek becomes a part of the county line in a southerly direction to near the Virginia boundary. The main body of the county is a rich limestone, but apples thrive well upon it, and there are now a number of very profitable commercial apple and peach orchards distributed through the county. Besides the Norfolk & Western, the Baltimore & Ohio has two lines passing across the county, so the very best of R. R. transportation is offered. The fruit list here presented gives a large selection of choice dessert fruits, together with the standard market sorts for the eastern division of the State. There is a local nursery at Middleway, owned by Fry & Chinneworth, and another at Kearneysville owned by Dr. D. W. Border.

KANAWHA COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or celsars in fit condition for April market.	Varieties which bear most regularly - underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo..... Smith's Cider..... Yellow Transparent. Rome Beauty	Rome Beauty..... Ben Davis..... York Imperial.... Rall's Genet.....	Ben Davis..... Rome Beauty..... Rall's Genet..... York Imperial or Johnson's F. W. Winter.	<i>Rome Beauty</i> <i>Ben Davis</i> Wine-ap..... <i>Missouri Pippin</i> ...	Rome Beauty.... Ben Davis..... R. I. Greening... Wagener.....	Roxbury Russet. Maiden Blush... Baldwin..... Prior's Red - Big Hill.	Winesap. Rambo. Milam. Ralls Genet.
Ben Davis..... Early Harvest..... Fall Orange..... Tompkins King.... Horse.....	Grimes Golden.... Hill's Seedling.... Smith's Cider..... Buckingham..... Tompkins King... Summer Queen.... Maiden Blush.... Winesap.....	Virginia Greening. Wilson's Seedling. Hill's Seedling.... English Russet... Winesap..... Grindstone..... Maiden Blush.... Grimes Golden....	<i>Wilson</i> Smith's Cider.... Hill's Seedling.... Yellow Transparent. Pea (main)..... Stark..... Shockley..... Maiden Blush....	Wilson..... Bailey Sweet.... Bough, Sweet.... Pumpkin Sweet. Sweet Russet.... Rambo..... Ralls Genet.... Red Baldwin.... Winesap.	Gravenstein..... Swaar..... Pound Royal.... Summer Vandevere. Yellow Transparent. Buckingham. Rome Beauty. Yellow Bellflower.	Sweet Russet. R. I. Greening. Rome Beauty.
Grimes Golden.... Baldwin..... Winesap..... Northern Spy..... Smokehouse..... Nodhead.....	White Pippin..... Early Strawberry Roxbury Russet.. Shockley..... Baldwin..... Tulpehocken.....	Romanite..... Roxbury Russet.. Tompkins King... Shockley..... York Imperial.... Baldwin.....	Early Strawberry. Red June. Roxbury Russet. Northern Spy. Rambo. Winter Vandevere			

KANAWHA COUNTY.—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Wagner..... Fallwater..... Golden Sweet..... Pound Royal..... Winter Vandevere.	Big Hill..... Wagner..... Wilson..... Grindstone..... Jonathan.....	Big Hill..... Wilson..... Winter Vandevere White Pippin..... Jonathan.....	<i>Pound Royal.</i> <i>Ralls Genet.</i> <i>Russian Crab.</i> Grindstone. Grimes Golden....			

The natural facilities for transportation afforded by the Kanawha River, together with good freight service on 3 lines of R. R., together with the capital city of the State and a large population engaged in mining, should make Kanawha county the producer of large quantities of all classes of horticultural products. The area of the county north and east of the Kanawha river, divided into two sections by the Elk river should prove successful apple growing sections. At present, however, not as much attention is given to this industry as the markets or the areas suited to it will permit. The fruits suited to the region are of high grade, both from a dessert and market standpoint.

LEWIS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pit or cellar in fit condition for April market.	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Rambo	Rome Beauty.....	Grindstone.....	Malden Blush.....	Fallawater.....	Yellow Pippin..	Russet.
Early Harvest.....	Ben Davis.....	Ben Davis.....	Baldwin.....	Pound Royal....	Peck's Pleasant.	Millam Red.
Winesap.....	York Imperial....	Rome Beauty....	Ben Davis.....	Rall's Genet....	Millam.....	
July Sweet.....	York Imperial....	York Imperial, or Johnson's Fine Winter.	<i>Rome Beauty</i>	White Pippin....	Nickajack.....	
Rome Beauty.....	Johnson's Fine Winter.	Johnson's Fine Winter.				
Baldwin.....	Grimes Golden....	Rall's Genet....	R. I. Greening....		Pound Pippin..	
	Winter Rambo....	Lumber Twig....	Fall Rambo.....		Yellow Transpar-ent.	
Bough, Sweet.....	Roxbury Russet..	Romanite.....	Smokehouse....		York Imperial.	
Northern Spy.....	Pennock.....	Winter Pippin..	Rambo.....		Rome Beauty.	
Fallawater.....	Spitzenburgh....	Baldwin.....	Northern Spy....		Northern Spy.	
Yellow Bellflower..	Golden Russet....	Northern Spy....	<i>York Imperial or Johnson's Fine Winter.</i>			
Golden Sweet.....	Yellow Bellflower.	Grimes Golden....	<i>Never Fail.</i>			
R. I. Greening.....	Northern Spy....	N. W. Greening..	<i>Rall's Genet.</i>			
Ben Davis.....	Winesap.....	Winter Rambo....	Early Harvest..			
Malden Blush.....	Fall Wine.....	Millam.....	Roxbury Russet.			
Black Apple.....	Fallawater.....	Roxbury Russet..	Winesap.....			
Rall's Genet.....	Malden Blush....	Green Winter Pippin.	Yellow Transpar-ent.			
Nickajack.....	Grindstone.....	Never Fail.....	Golden Russet,			
Millam.....	Millam.....	Arkansas Mam'th Black Twig.	Golden Sweet..			
Waldour.....	Transcendent....	Smokehouse.....	Pound Royal..			
Yellow Transpar-ent.	R. I. Greening....	Golden Russet....	Bradford's Best.			
Red June.....	Tompkins King...	Belmont.....	Walbridge.....			
York Imperial....	Nansemond.....	Oldenburg, Duch-ess of.	Pewaukee.....			
Roxbury Russet....	Never Fail.....	Russet.....	Romanite.....			

LEWIS COUNTY.—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Grimes Golden..... Winter Russet..... Summer Queen.....	Pound Royal..... Oldenburg, Duchess of. Russet..... Yellow Transparent. Romanite. Nickajack. Smith's Cider. Walbridge.	Nickajack. Smith's Cider.	Nickajack.			

Apple growing in Lewis county is as a rule confined to the farm orchard. The product is sufficient to supply the home and the local market. There are no commercial orchards reported. The railroads of the county should tend to encourage this industry, as outlet to the western as well as the seaboard cities is thus afforded. The map also indicates that the northern part of the county should share the growth of this business with Harrison county. The list of varieties reported from Lewis is one of the largest and most varied received from any county, indicating that orchards now planted contain a large collection of the best sorts, and that the question of sorts need no longer deter one from planting commercial orchards.

LINCOLN COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty..... Winter Russet..... Yellow Bellflower..	Rome Beauty..... Ben Davis..... Russet..... Tompkins King... Sops of Wine.....	Rome Beauty..... Ben Davis..... Tompkins King... Sops of Wine.....	Rome Beauty. Tompkins King. Sops of Wine. Grimes Golden. Ben Davis.			

Although possessing large areas suited to the production of apples, the commercial industry is precluded because of lack of transportation facilities. About Hamlin several persons are giving considerable attention to the fruit problems of the county, and when the time comes that means of reaching the markets are afforded the county in general will be benefited by the experience of those who are now working against such odds. The fruit list reported is meager, but contains both of the standard market sorts for this quarter of the State, *i. e.*, Rome Beauty and Ben Davis.

LOGAN COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—undersored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Tompkins King.... Grimes Golden.... Pearmain..... Maiden Blush.... French.....	Ben Davis..... Rome Beauty.... York Imperial.... Ralls Genet..... Winesap..... Lansingburg.... Buckingham.... Red Astrachan....	Ben Davis..... Rome Beauty.... Ralls Genet.... Lansingburg....	<i>Ben Davis</i> <i>Early Harvest</i> Rock Apple..... Striped June..... Smith's Oider.... Rome Beauty.... Yellow Transparent. Ralls Genet..... Johnson's Fine Winter.	Tompkins King. Rome Beauty.	Ben Davis.	

While all sorts of fruits and vegetables are reported as doing well in this county, commercial horticulture is out of the question, as the county has no railroad or water way by which such products could be placed in the market. The map would indicate that apples were well adapted to certain localities which may be found to be much larger than represented by this preliminary survey. The fruit list, while not large, includes an excellent selection.

MCDOWELL COUNTY.

TABLE FRUITS.	MARKET FRUITS,	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Rome Beauty	<i>Rome Beauty.</i>			
Rome Beauty	Ben Davis	New Town Pippin.	<i>Itambo.</i>			
Red June	York Imperial....	Ben Davis	<i>Ben Davis.</i>			
Early Harvest....	New Town Pippin.	York Imperial ...	<i>Nickajack.</i>			
Pound Royal	Nickajack.....	Shockley	<i>Early Harvest.</i>			
Winesap.....	Winter Queen....	Winesap	<i>Robertson's White.</i>			
Seek-no-Further. .	Winesap.....	Robertson's White	<i>Winesap.</i>			
Baldwin	Lumber Twig.....	.....	<i>Baldwin.</i>			
Crow Egg.....	Robertson's White	.....	<i>Robertson's.</i>			
Milam	Winter Greening..	.....	<i>Pound Royal.</i>			
	Shockley .....	.....	<i>R. I. Greening.</i>			
	Early Harvest....	.....	<i>Winter Queen.</i>			

Little or no attention is given to fruit growing in the county, although the reports received indicate that at least 25 per cent. of the area of the county is suited to apple growing. The black cross hatching represents the area reported, while the red suggests the area as indicated by natural features. The apple list proves that our best commercial varieties thrive well in the locality.

MARION COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Smith's Cider..... Northern Spy..... Maiden Blush..... Pound Royal..... May Apple Pippin..... Rome Beauty..... Baldwin..... Waldour..... Golden Pippin..... Early Harvest..... Early Strawberry..... Loudon Co. Sweet..... Rambo..... Bough Sweet..... Benoni..... Grimes Golden..... Golden Sweet..... Gillflower..... Late Strawberry..... Winesap..... Vandevere.....	Rome Beauty..... Ben Davis..... York Imperial..... Stark..... Baldwin..... Smith's Cider..... Northern Spy..... R. I. Greening..... Pennock..... Red Romanite..... Grindstone..... Golden Russet..... Winter Rambo..... Romanite..... Loudon Co. Sweet..... Pound Royal..... Grimes Golden..... Fall Wine..... Winesap..... Pewaukee..... Tompkins King.....	Ben Davis..... York Imperial..... Rome Beauty..... Green New Town..... Vandevere..... Smith's Cider..... Grindstone..... Romanite..... Lumber Twig..... Spitzenburgh..... Russet..... Loudon Co. Sweet..... Bentley..... American Pippin..... Willow Twig..... Yellow Bellflower.....	Maiden Blush..... <i>Rome Beauty</i> R. I. Greening..... <i>Ben Davis</i> Baldwin..... Winesap..... Yellow Sweet..... Fall Rambo..... Winter Rambo..... <i>Rambo</i> Loudon Co. Sweet..... Northern Spy..... Green New Town..... Benoni..... Romanite..... Willow Twig..... Fall Orange..... Late Strawberry.....	Pound Royal..... Rock Remain..... R. I. Greening..... Rambo..... August Sweet..... Winesap..... Early Harvest..... Baldwin..... Gravenstein..... Tompkins King..... Vandevere..... Black Jersey..... Rome Beauty..... Gloria Mundi..... Bentley Sweet..... Northern Spy..... Lumber Twig.....	Romanite..... Grindstone..... Rome Beauty..... Spice Apple..... Northern Spy..... Fallwater..... Golden Sweet..... York Imperial.....	Bentley Sweet, Winter Pippin.

Apples are grown to a considerable extent and find a ready sale in the local markets. Few, if any, are grown for export. In fact, many more high grade fruits would be consumed in the local markets were they grown. The soil and exposure of several portions of the county are well suited to the production of the apple. The county is also well provided with railroad facilities. A more extended industry along this line will undoubtedly be built up to meet the demands of the growing towns and villages. The variety list reported is extended and contains many superior cooking and eating sorts, as well as the standard market varieties.

MARSHALL COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo..... Roman Stem..... Pound Royal.....	Ben Davis..... Rome Beauty..... Baldwin.....	Ben Davis..... Rome Beauty..... Willow Twig.....	Baldwin..... Russet..... Rambo.....	Bentley Sweet..... Rambo..... Winter Greening.....	Rome Beauty..... Baldwin..... Sheepnose.....	Red June Rambo Lawyer—De la-ware Red Winter Willow Twig. Ralls Genet. Northern Spy. Romanite. Yellow Bellflower
June Sweeting..... Winesap..... English Rambo..... Early Harvest..... Grimes Golden..... Baldwin..... Northern Spy..... Green Newtown..... Rome Beauty..... Spitzenburgh..... Maiden Blush..... Pumpkin Sweet..... Golden Sweet.....	Pearmain..... Russet..... Kentley Sweet..... Koxbury Russet..... Grindstone..... Rambo..... Winter Rambo..... Vandevere..... Early Harvest..... Maiden Blush..... Northern Spy..... Winesap..... Gillflower..... Golden Russet..... Roman Stem.....	*Bentley Sweet..... Black Apple..... Grindstone..... Stark..... Spitzenburgh..... Russet..... R. I. Greening..... *Romanite..... Golden Russet..... Pearmain..... Winter Winesap..... English Rambo..... Northern Spy.....	Roman Stem..... Early Harvest..... Wine-ap..... Golden Sweet..... Early Strawberry..... Ben Davis..... Northern Spy..... Maiden Blush..... Tompatas King..... Yellow Bellflower..... Bentley Sweet.	Smokehouse..... Red June..... Pearmain..... Pound Royal..... Rough, Sweet..... Red Russet..... Pennock..... Yellow Bellflower	Roman Stem..... Ben Davis..... Tompatas King..... Grimes Golden..... Spitzenburgh..... Northern Spy.....	*Same.

One of the four counties comprising that remarkable section of West Virginia, known popularly as the Northern Panhandle, it shares with the other counties comprising this region a soil and climate well suited to the growth and maturity of the apple. While there are no large commercial apple orchards, the aggregate product of the county is large and the orchard area is pretty generally distributed over the county, as is shown by the reports as platled on the map. The variety list includes a good selection of market sorts, and the transportation facilities offered by the B. & O., the Ohio River R. R. and the Ohio river should tend to increase the production of this fruit.

MASON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty..... Early Harvest..... Yellow Belleflower..... Smith's Cider..... Summer Pippin..... Grimes Golden..... Winesap..... Maiden Blush..... Golden Russet..... Pound Royal..... Paradise Sweet..... Ohio Nonpareil..... Baldwin..... Northern Spy..... Golden Sweet..... Seek-no-Further..... New Town Pippin..... Rambo..... Romanite..... Roxbury Russet..... Strawberry..... Yellow Transparent..... Russet..... Hurlburt..... Ben Davis..... R. I. Greening.....	Rome Beauty..... Ben Davis..... Smith's Cider..... Baldwin..... Grimes Golden..... Stark..... Maiden Blush..... Golden Russet..... Sops of Wine..... Winesap..... Nansmond..... Arkansas..... Northern Spy..... New Town Pippin..... Roxbury Russet..... Tompkins King..... Russet..... Early Harvest..... Red Astrachan..... Strawberry..... Yellow Transparent..... Russet..... Hurlburt..... Ben Davis..... R. I. Greening.....	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty..... Early Harvest..... Yellow Belleflower..... Smith's Cider..... Summer Pippin..... Grimes Golden..... Winesap..... Maiden Blush..... Golden Russet..... Pound Royal..... Paradise Sweet..... Ohio Nonpareil..... Baldwin..... Northern Spy..... Golden Sweet..... Seek-no-Further..... New Town Pippin..... Rambo..... Romanite..... Roxbury Russet..... Strawberry..... Yellow Transparent..... Russet..... Hurlburt..... Ben Davis..... R. I. Greening.....	Rome Beauty..... Ben Davis..... Smith's Cider..... Baldwin..... Grimes Golden..... Stark..... Maiden Blush..... Golden Russet..... Sops of Wine..... Winesap..... Nansmond..... Arkansas..... Northern Spy..... New Town Pippin..... Roxbury Russet..... Tompkins King..... Russet..... Early Harvest..... Red Astrachan..... Strawberry..... Yellow Transparent..... Russet..... Hurlburt..... Ben Davis..... R. I. Greening.....	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty..... Early Harvest..... Yellow Belleflower..... Smith's Cider..... Summer Pippin..... Grimes Golden..... Winesap..... Maiden Blush..... Golden Russet..... Pound Royal..... Paradise Sweet..... Ohio Nonpareil..... Baldwin..... Northern Spy..... Golden Sweet..... Seek-no-Further..... New Town Pippin..... Rambo..... Romanite..... Roxbury Russet..... Strawberry..... Yellow Transparent..... Russet..... Hurlburt..... Ben Davis..... R. I. Greening.....	Rome Beauty..... Ben Davis..... Smith's Cider..... Baldwin..... Grimes Golden..... Stark..... Maiden Blush..... Golden Russet..... Sops of Wine..... Winesap..... Nansmond..... Arkansas..... Northern Spy..... New Town Pippin..... Roxbury Russet..... Tompkins King..... Russet..... Early Harvest..... Red Astrachan..... Strawberry..... Yellow Transparent..... Russet..... Hurlburt..... Ben Davis..... R. I. Greening.....	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.

Mason county presents another example of the results of the stimulus of good transportation facilities upon the fruit industry. Several commercial orchards are reported. The soil and exposure in certain portions of the county are well suited to the industry and high lands back from Point Pleasant present natural features which should make peach growing a profitable industry. It is

possible that the areas represented as best suited for apple culture on this preliminary map may be wide of the true state of affairs, but it is the best that can be presented from the information at hand. The large list of varieties indicates that apple culture has received considerable attention, and that it was very universal throughout the county.

MERCER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pit or cell in fit condition for April market.	Varities which bear most regularly - underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Rambo.....	Ben Davis.....	Ben Davis.....	<i>Grindstone</i>	Walker's Red ...	Fallwater.....	Summer Pearmain.
Queen.....	York Imperial.....	York Imperial.....	<i>Apple Butter Apple</i>	Manu.....	Maiden Blush ...	Sops of Wine
Pearmain.....	Rome Beauty.....	Rome Beauty.....	<i>Binesap</i>	Horse.....	Grimes Golden ..	Rome Beauty.
Northern Spy.....	Improved Pearmain.....	Pearmain.....	<i>Northern Spy</i>	Grimes Golden..	Ben Davis.....	Lumber Twig.
Rome Beauty.....	Ralls Genet.....	Grindstone.....	<i>Favorite</i>	Pound Royal ...	Yellow Transparent.	Grimes Golden.
Grimes Golden.....	Queen.....	Grimes Golden ..	<i>Ben Davis</i>.....	.....	.....	Winesap.
Red Astrachan.....	Rambo.....	Northern Spy ..	Rall's Genet.....	.....	.....	Early Ripe.
Yellow Transparent.	Northern Spy.....	Winesap.....	Rome Beauty.....	.....	.....	Cheese, Green.
Maiden Blush.....	Fallwater.....	Stark.....	Buckingham.	.....	.....	.....
York Imperial.....	Smith's Cider.....	Rall's Genet.....	Red Astrachan	.....	.....	.....
	Buckingham.....	Sops of Wine ..	R. I. Greening.	.....	.....	.....
	K. I. Greening.....	Rambo.....	Pearmain.	.....	.....	.....
	Lumber Twig.....	English Russet....	English Russet.	.....	.....	.....
			Never Fail.	.....	.....	.....
			York Pippin.	.....	.....	.....
			Pound Royal.	.....	.....	.....

A goodly quantity of apples is grown in the county, yet the commercial production of the fruit is not engaged in. About 80,000 bushels is reported as an average crop, yet few, if any, find their way out of the county. The eastern part of the county is reported as a successful apple producing section. The Norfolk and Western railroad affords means of transportation, and in sections not too remote commercial apple culture should prove profitable. The list of varieties is good, both from the commercial and culinary point.

MINERAL COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Northern Spy.....	Ben Davis.....	Ben Davis.....	Grimes Golden.....	Early Harvest.....	Northern Spy.....	Early Harvest.
Rambo.....	Rome Beauty.....	York Imperial.....	Tompkins King.....	Northern Spy.....	R. I. Greening.....	Vandevere.
Sweet Paradise.....	York Imperial.....	Vandevere.....	Twenty Ounce.....	Astrachan.....	Chenango.....	Winter Rambo.
Early Strawberry.....	Baldwin.....	Roxbury Russet.....	Red Astrachan.....	Twenty Ounce.....	Roxbury Russet.....	Red June.
Winesap.....	Northern Spy.....	Baldwin.....	Ben Davis.....	Ben Davis.....	Red Vandevere.....	Grimes Golden.
Summer Queen.....	Grimes Golden.....	Lumber Twig.....	Lumber Twig.....	Maiden Blush.....	York Imperial.....	Baldwin.
Maiden Blush.....	English Rambo.....	Fallawater.....	Golden Sweet.....	Roxbury Russet.....	Yellow Transparent.....	Winesap.
Yellow Transparent.....	Yellow Bellflower.....	Grimes Golden.....	Northern Spy.....	Smith's Cider.....	Summer Queen.....	
Oldenburg, Duchess of.....	Birmingham B'ty.....	Winesap.....	Cooper.....	Rome Beauty.....	Tetofski.....	
Early Harvest.....	King.....	Cooper.....	York Imperial.....			
Chenango.....	Winesap.....	Cannon Peppermint.....	Vandevere.....			
Mother.....	Oldenburg, Duchess.....	Winter Wagener.....	Early Harvest.....			
Grimes Golden.....	Summer Astrachan.....	New Town Pippin.....	Rambo.....			
Winter Wagener.....	Mother.....	Spitzenburgh.....	White Pippin.....			
York Imperial.....	Fallawater.....	Green Pippin.....	Winesap.....			
Yellow Bellflower.....	Smokehouse.....	Rambo.....	Fallawater.....			
Vandevere.....	Buncombe, Red Winter Peppermint.....	Black Apple.....	Tetofski.....			
	ter Peppermint.....		Leather-Cod.....			
Golden Sweet.....	Vandevere.....		Summer Queen.....			
Smokehouse.....	Rambo.....		Pumpkin Sweet.....			
August Sweet.....	Green Pippin.....		Maiden Blush.....			
Fallawater.....	Twenty Ounce.....		Johnson's F. Winter.....			
			Green Pippin.....			
			Red June.....			

The fertile valleys of Patterson's creek and other tributaries of the Potomac have held the attention of the people generally upon grazing and general agriculture. The fine shale soil belonging to the Komney shale formation spreads itself out along the mountain

sides from end to end of this county. The keen-eyed promoters of the peach business in this region of the State have been awake to the possibilities here offered, and now have extensive plantations in this county. Besides the interests of the Alleghany Fruit Company, there are a number of private enterprises, but most attention is given to the peach. In this county we find one of the few localities of the State where "sweet cherries" may be expected to prove a commercial success. The apple list of the county includes all the standard sorts of the region, both for dessert and commercial purposes, yet the county cannot be said to be a commercial apple region.

MINGO COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPER.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Yellow Transparent Smith's Cider.....	Ben Davis.....	Ben Davis.....	<i>Ben Davis</i>	World's Wonder	Wayne Co. Seedling	Buckingham....
Maiden Blush.....	Rome Beauty	York Imperial.....	<i>Limber Twig</i>	Red Astrachan..	Ben Davis	Kentucky Red Streak
Red June.	York Imperial.....	Rome Beauty	Nickajack	Oldenburg, Duchess of	Limber Twig....	
Rome Beauty	Winesap.....	Arkansas.....	Northern Spy.....	Early Strawberry	Nickajack	
Ben Davis.....	Arkansas—Mam'th Black Twig.	Winesap.....	Wayne Co. Seedling	Kentucky Red Streak	Northern Spy...	
Early Harvest.....	Daddy Apple.....	Daddy Apple.....	<i>Rome Beauty</i>		Daddy Apple ...	
Rambo	Red Astrachan....	Wayne Co. Seedling	Fallwater		Rome Beauty...	
White June.....	Limber Twig.....	Limber Twig.....	Shockley		Winesap.....	
Early Ripe.....	Nickajack.....	Northern Spy	<i>Winesap</i>		Early Harvest..	
	Northern Spy	Shockley	<i>Pound Royal</i>			
	Shockley	Arkansas—Mam'th Black Twig.	<i>Golden Russet</i>			
			Early Harvest			

Mingo county does not produce apples commercially, although the shipping facilities offered by the Norfolk & Western, together with good local markets, should build up such an industry. The map indicates that areas well suited for commercial apple culture are to be found in the northeastern as well as the southern part of the county. The apple list also indicates the good selection of commercial and culinary sorts which the county is capable of producing.

MONONGALIA COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Washington Wine. Rambo. Ben Davis. Baldwin. Golden Sweet. Waldour. Black Jersey. Early Harvest. Maiden Blush. Red Astrachan. Lumber Twig. Harvest Sweet. Yellow Bellflower.	Ben Davis. York Imperial. Rome Beauty. Baldwin. Northern Spy. Washington Wine. English Rambo. Waldour. R. I. Greening. Maiden Blush. Lumber Twig. Harvest Sweet. Yellow Bellflower.	Ben Davis. York Imperial. Grindstone. Rall's Genet. Spitzenburgh. Washington Wine. Lumber Twig. Russet. Romanite. Pennock. Winter Wine. Simpson. Waldour.	Spitzenburgh. Washington Wine. Grindstone. Russet. York Imperial. Pennock. English Rambo. Winter Wine. Lumber Twig. Maiden Blush. Baldwin. Northern Spy.	.....	Varieties most exempt from scab.	Rall's Genet.

The elevated lands lying between the Cheat and Monongahela rivers are well suited to the growth of fruits,—the heavier soils to apples and the sandy lands to peaches. North and west of the Monongahela river, where the soil is of a limestone nature, we find the territory best suited to the growth of the apple. The standard market fruits all grow well here, but annual crops are by no means the rule. In even the best territories the biennial crop is not a certainty. In the neighborhood of the Experiment Station the orchards carried a heavy crop in 1895, and again in 1899, with very few apples during during any intermediate season. The high land orchards on strong lands have done better than this, and bore a crop in 1897. While there is territory enough suited to the industry to encourage a large commercial development were it within convenient range for shipment, the long haul necessary to deliver the fruit at a shipping point will long hinder the development of this resource.

MONROE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand	Sorts having best form, color and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Northern Spy.....	Ben Davis.....	Ben Davis.....	York Imperial....	Yellow Trans-ent.	York Imperial..	Early Harvest.
Tompkins King.....	Rome Beauty.....	York Imperial....	Ben Davis.....	York Imperial..	Rome Beauty....	Rome Beauty.
Fall Rambo.....	York Imperial....	Roxbury Russet..	Roxbury Russet..	Fallawater.....	Rall's Genet....	Pound Royal.
Roxbury Russet....	Northern Spy....	Rall's Genet.....	Winter Pearmain.	.....	Pearmain.....	Never Fail.
York Imperial, or Johnson's Fine Winter	Winesap.....	Grindstone.....	Early Joe.....	.....	Ben Davis.....	Golden Russet or Bullock's Pippin
Early Joe.....	Roxbury Russet..	R. I. Greening....	Jeffers.....	.....	Yellow Bellflower	Winesap.
Chenango.....	R. I. Greening....	Northern Spy....	R. I. Greening....	.....	Northern Spy...	Pearmain.
Jeffers.....	Arkansas—Mam'h Black Twig.	Shockey.....	Wealthy.....	.....	Winesap.....	R. I. Greening.
Grimes Golden,...	Gano.....	Arkansas—Mam'h Black Twig.	Rall's Genet....	.....	Golden Sweet...	Big Hill.
Westfield Seek-no-Further.	Smith's Cider.....	Willow Twig.....	Rome Beauty.	.....	.....	.....
Famutesc, or Snow.	Nickajack.....	Rome Beauty.....	Winesap.	.....	.....	.....
Yellow Bellflower...	Shockey.....	Winesap.....	Summer Rose.	.....	.....	.....
Pearmain.....	Paragon.....	Gano.....	Wagener.	.....	.....	.....
Golden Russet....	Baldwin.....	Paragon.....	Johnson's Fine Winter.	.....	.....	.....
Yellow Transparent.	New Town Pippin.	Golden Russet....	Never Fail.	.....	.....	.....
Maiden Blush.....	Grimes Golden....	Winter Pearmain	Rambo.	.....	.....	.....
Rambo.....	Rall's Genet....	Vandevere.....	Baldwin.	.....	.....	.....
Fallawater.....	World's Wonder..	Limber Twig.....	Yellow Transparent.	.....	.....	.....
Smokehouse.....	.....	Roman Stem.....	Grimes Golden.	.....	.....	.....
Baldwin.....	.....	English Russet..	Smokehouse.	.....	.....	.....
Golden Sweet.....	.....	Yellow Russet....	Yellow Bellflower.	.....	.....	.....
Early Harvest.....	.....	.....	Northern Spy.	.....	.....	.....
R. I. Greening.....	.....	.....	Early Harvest.	.....	.....	.....
Rome Beauty.....	.....	.....	N. Y. Pippin.	.....	.....	.....
Pound Royal.....	.....	.....	Lady Finger	.....	.....	.....

MONROE COUNTY—Continued.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Fall Winesap. N. Y. Pippin.						

No commercial apple industry exists in this county, yet the home product is about equal to the demand. The greater part of the county is reported as favorable to apple culture, as is indicated by the map. There is considerable interest manifested in the culture and test of varieties by several parties in the county. This is notably in the case of Mr. G. S. Scott, Sink's Grove, who is testing a large variety collection. The results of this work should prove of immense value to the whole of that portion of the State located in the mountain region south of Randolph county. The large list of varieties already shown to be of merit in the county is sufficient to justify one in planting extensively, but the tests now in progress may add varieties even more valuable to the section than any of those included in the accompanying list.

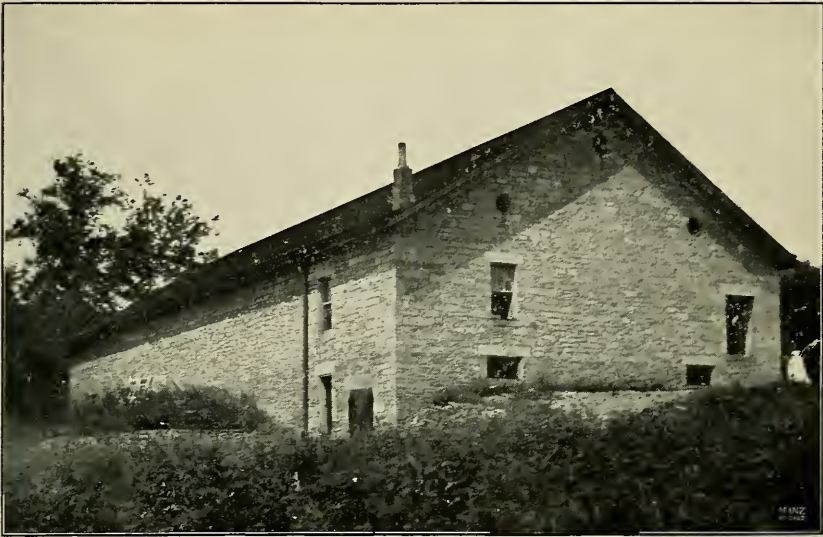


FIG. 12.—Cold Storage House of Wm. F. and Robt. Brown, Hancock, Co., W. Va. Capacity 10,000 Barrels.

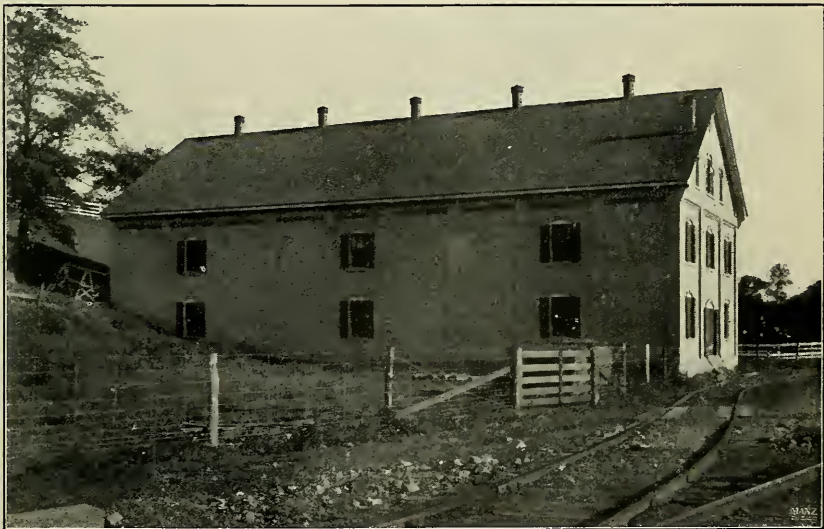


FIG. 13.—A Recently Erected Warehouse in Hancock Co., W. Va.

MORGAN COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Pumpkin Sweet.... Yellow June..... Red Streak..... Jonathan's Fine Winter. Sweet Paradise....	Ben Davis..... York Imperial.... Jonathan..... Grimes Golden.... Baldwin.....	Ben Davis..... York Imperial.... Rall's Genet..... Baldwin.....	Green Pippin..... Willow Twig..... Ben Davis..... Black (Jersey)..... Johnson's Fine Winter. <i>Summer Queen</i> <i>Fallawater</i> Lumber Twig..... York Imperial.... Roman Knight or Carthouse. Winesap..... Yellow Transparent. Early Harvest.	Winter Sweet... Rambo..... Nonsuch..... Hyslop..... Alexander..... Twenty Ounce.. Pound Royal... Sweet Paradise.. York Imperial.. Ben Davis. Maiden Blush.	Ben Davis..... York Imperial.. Northern Spy... Green Pippin.... Wolf River..... Grimes Golden.. Tetofski..... Red Astrachan..	Green Pippin.. Bellflower.. Nonsuch.. Rambo.. Eng. Red Streak. Alexander.. New Town Pipp'n.. Summer Queen.. Rall's Genet.
Summer Queen.... Rambo..... Fallawater.... Maiden Blush.. Baldwin..... Early Harvest..... Long Stem..... Oldenburg, Duchess of. Golden Ball..... Smokehouse..... Golden Sweet....	Winesap..... Fallawater..... Alexander.....	New Town Pippin.. Northern Spy.... Fallawater.....	Grimes Golden.. Alexander.. Hyslop.. <i>Smokehouse</i> .. <i>Rambo</i> .. Sweet Paradise.. Maiden Blush.. Golden Russet.. Northern Spy.	.....	.....	.....

Morgan, like Hardy, county undoubtedly possesses areas well suited to the perfection of high quality apples. In general, however, the trees will be of only moderate growth, and the fruit, while well colored, will be medium to small in size. With heavy dressing of phosphoric acid and nitrogen this would undoubtedly be corrected, but with the present lack of transportation facilities for those portions of the county where apples might be expected to do best the industry will be slow in attaining a commercial character.

NICHOLAS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Golden Sweet.....	Rome Beauty	Ben Davis	Rome Beauty.....	Red June.....	.....	Winter Sweet.
Rome Beauty.....	Ben Davis	Rome Beauty	Ben Davis	Milan Vert.....	.....	Ben Davis.
Maiden Blush.....	Rall's Genet.....	Grindstone	Golden Sweet.....	Ben Davis .....	.....	Nickajack.
Twenty Onnee.....	Vandevere.....	Vandevere.....	Golden Russet.....	Nickajack.....	.....
Yellow Bellflower..	Baldwin	Baldwin	Winter Sweet.....	Alexander.....	.....
Jeffers	Early Harvest.....	Milan Vert	Vandevere	Transcendent.	.....
Vandevere.....	Red June.....	Nickajack	Early Harvest.....	Baldwin.....	.....
White Pippin.....	Nickajack.....	Winter Sweet.				
Yellow Transparent	Grindstone.....	English Russet.				
Pumpkin Sweet.....	Winesap.....					
Fall Pippin.....	Fall Pippin.....					
	Yellow Transpar-					
	cut.					
	English Russet.					

The position and contour of Nicholas county would seem to favor the cultivation of fruits and the apple in particular. This has been suggested by the correspondent in mapping the county. The present fruit development is limited to supplying local demand, as there are no navigable streams or railroads within the county which would foster a commercial industry. The variety list shows a good selection for market as well as dessert purposes.

OHIO COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for keeping out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Fall Pippin.....	Rome Beauty	Rome Beauty	Ben Davis	Waldour	Fall Pippin.....	Rome Beauty.
Hubbardston	Baldwin	Ben Davis	Golden Sweet.....	Bough, Sweet.....	Sweet Bough....	Never Fall.
Grimes Golden.....	Ben Davis	Willow	English Rambo....	Gillflower.....	Northern Spy ...	NewTown Pippin
Bongh, Sweet.....	Bentley Sweet.....	Romanille.....	Rome Beauty	Findley Queen....	Baldwin.....	Rambo.
Yellow Transparent	York Imperial	NewTown Pippin	Grimes Golden.....	Autumn Swaar....	Yellow Belflow'r	
Black Gillflower....	Grimes Golden.....	Pearmaine.....	English Strawberry	Fallowater.....	Maiden Blush....	
Rambo.....	Hubbardston	Bentley Sweet.....	Bough, Sweet.....	Rome Beauty	Rambo.....	
Baldwin	Fall Pippin.....	Roxbury Russet...	Fallowater.....	Fall Pippin.....	Bentley Sweet....	
Smith's Elder.....	Sweet Bough.....	Winter Pearmain.	Maiden Blush....	Roxbury Russet..	Ben Davis.....	
Early Harvest.....	Northern Spy.....	Grimes Golden.....	Sweet Russet.....	R. I. Greeuing....	Famuse.....	
Sweet Swaar.....	Yellow Belflower..	Russet.....	Bentley Sweet.....	.....	Pumpkin Sweet....	
Golden Sweet.....	Russet.....	Grindstone	Roxbury Russet...	.....	Russet.....	
Peck's Pleasant.....	Waldour.....	Baldwin.....	Early Harvest....	.....	
English Rambo.....	Pennock.....	Waldour.....	Rambo.....	.....	
Farris Sweet, or R.	English Rambo....	R. I. Greening....	Pound Sweet.....	.....	
I. Seek-no-Furth'r						
Roman Stem.....	R. I. Greening.....	Cunningham Sw't.				
Maiden Blush.....	Pound Sweet.....	.....			
Famuse.....	Tompkins King....	.....			
Roxbury Russet....						
Red Astruchan.....						
Strawberry.....						
Northern Spy.....						
Vane.....						
Gillflower.....						

This county undoubtedly provides the best local market in the State. With this stimulus commercial horticulture has grown to be an important industry. Market gardening, as well as the growing of small and orchard fruits, affords a remunerative industry for many people in the county. Commercial apple culture is not carried on as it is in Hancock county, yet there are several important orchards in the county. The sections best suited for this industry are indicated by the map, and the fruit list indicates the range or choice which the grower has.

PLEASANTS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Pound Royal..... Maiden Blush..... Rambo..... Baldwin..... Black Gilliflower...	Rome Beauty..... Ben Davis..... Grimes Golden..... Romanite..... Willow Twig.....	Grindstone..... Ben Davis..... Rome Beauty..... Romanite..... Green Pippin.....	<i>Pound Royal</i> <i>Aced Astrachan</i> <i>Rome Beauty</i> <i>Grimes Golden</i> <i>Rambo</i>	Ben Davis..... Russet..... Rome Beauty..... Pound Royal..... Northern Spy.....	Romanite..... Maiden Blush... Pound Royal... Prior's Red..... Yellow Trans-parent.....	Romanite. Rome Beauty. Rambo. Early Harvest. Pearmain.
Chandler..... Early Harvest..... Northern Spy..... Grimes Golden..... Benoni..... Yellow Bellflower.. Golden Sweet..... Green Cheese..... Seek-no-Further... Fall Wine..... Winesap.....	Grindstone..... Peck's Pleasant.. Baldwin..... Lawyer..... Maiden Blush..... Winesap..... Moore's Extra.. Yellow Bellflower.. Russet..... Roxbury Russet.. Prior's Red..... Twenty Ounce.. Pound Royal.. Rambo.. Stark.	Peck's Pleasant.. Lawyer..... Northern Spy..... Pink..... Lumber Twig..... Arkansas..... Moore's Extra.. Yellow Bellflower.. Russet..... Roxbury Russet.. Prior's Red..... Twenty Ounce.. Pound Royal.. Rambo.. Stark.	Benoni..... Wine..... Romanite..... Roxbury Russet.. Ben Davis..... Northern Spy..... Chandler..... Pallawater..... Maiden Blush... Twenty Ounce.. Winesap..... Early Harvest... Pound Royal.....	Gilliflower..... Pallawater..... Green Cheese..... Pumpkin Sweet.. Cooper..... August Tart..... Fall Rambo..... Maiden Blush... Twenty Ounce.. Winesap..... Pound Royal.....	Rambo..... Roman Knight.. Ben Davis..... Russet..... Rome Beauty.. Bellflower.. Lumber Twig.. Grimes Golden.. Winesap.....	Northern Spy. Baldwin. Honey Sweet. English Russet.

Pleasants county shares with the other Ohio river valley counties the fruit industry, which seems to be the result of a favorable location and transportation facilities. A considerable quantity of high grade fruit is now produced, and much more might be. The hill orchards, as a rule, produce fruits of high color and good keeping qualities. The county is somewhat cut up by small streams, which outline the areas best suited to apples, as shown on the map. The varieties are characteristic of the upper Ohio River valley, and are well known and well received in the leading markets of the United States.

POCAHONTAS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo..... Tompkins King..... Golden Russet..... Northern Spy..... Stark..... Smokehouse..... Maiden Blush..... Winesap..... Fallawater..... Bellflower..... Pound Royal..... Bough, Sweet..... Summer Queen..... Rall's Genet..... Grimes Golden.	Ben Davis..... York Imperial..... Stark..... Rall's Genet..... Spitzenburgh..... Fallawater..... Sweet Paradise..... Penneock..... Waldour..... Milam..... Pound Royal..... Golden Russet..... Green New Town Pippin.	Ben Davis..... York Imperial..... Rall's Genet..... Golden Russet..... Romanille..... Winesap..... Grindstone..... Stark..... Maun..... Fallawater..... R. I. Greening..... Tompkins King..... Spitzenburgh.	<i>Northern Spy</i> <i>York Imperial</i> <i>Smokehouse</i> <i>Ben Davis</i> <i>Rambo</i> <i>Fallawater</i> Pound Royal..... Winesap..... Rall's Genet..... Early Harvest..... Ramsdell's Sweet.	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	Smokehouse..... Rambo..... Fallawater..... Roxbury Russet..... York Imperial..... Milam..... Maiden Blush..... Gravenstein.	Winter Winesap. Rustycosats.

The map indicates that considerable areas of this county are suited to apple culture. The tributaries of the Greenbrier, Gauley and Elk rivers cut the county into three regions. In general the fruit region is above the blue grass in a gravelly belt which extends along the sides of the mountains and tops of the hills. At present the growing of fruit is entirely limited to that for home use, yet the soil and climate would indicate that there are areas well suited to peaches and apples which with adequate transportation might become important fruit growing centers.

PRESTON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPER.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Fall Wine..... Smokehouse..... Gilliflower..... Baldwin..... Fallwater..... Northern Spy.....	Baldwin..... Ben Davis..... Rome Beauty..... York Imperial..... Grimes Golden..... Fallwater.....	Ben Davis..... York Imperial..... Rome Beauty..... Baldwin..... Bentley Sweet..... Nonsuch.....	Transcendent..... <i>Spitzenburg</i> Ben Davis..... Raidwin..... Waldour..... Rall's Genet.....	Sweet Russet..... Fallwater..... Lady Blush..... Pound Royal..... Rambo..... Smokehouse.....	Tompkins King..... Roxbury Russet..... Smokehouse..... Willow Twig..... Golden Russet..... Lawyer, Delaware..... Ware Red Winter..... Fallwater.....	Sour Bough..... Early Harvest..... Baltzby Sweet..... Malden Blush..... Northern Spy.....
Rall's Genet..... Yellow Bellflower..... Porter..... Rambo..... Ben Davis..... Sour Bough..... Red Astrachan..... Pearmain..... Sops of Wine..... Grimes Golden..... Rome Beauty..... Sweet Russet..... Early Strawberry..... Early Tart..... Pound Royal..... Early Harvest..... Yellow Transparent..... Guseman Sweet..... Bough, Sweet.....	Nonsuch..... Tompkins King..... Northern Spy..... R. I. Greening..... Rambo..... Belmont..... Yellow Transparent..... Oldenburg, Duchess of..... Lady Blush..... Yellow Bellflower..... Bentley Sweet..... Smokehouse..... Roxbury Russet..... Rosy Genet..... Malden Blush..... Lawyer—Delaware..... Ware Red Winter..... Spitzenburg..... Winesap..... Green Cheese.....	Rall's Genet..... Roxbury Russet..... Grindstone..... Winter Rambo..... Willow Twig..... Smith's Cider..... Romanite..... Fameuse..... Waldour..... Grimes Golden..... Fallwater..... Lawyer, Delaware..... Red Winter..... Spitzenburg..... Northern Spy..... Smokehouse..... Red Vandevere.....	Lady Blush..... Fallwater..... Northern Spy..... Tompkins King..... York Imperial..... Porter..... Rambo..... <i>Smokehouse</i> Oldenburg, Duchess of..... Sops of Wine..... Rome Beauty..... Smith's Cider..... Fameuse..... Roxbury Russet..... <i>Early Strawberry</i> <i>Black Gilliflower</i> Grimes Golden..... Beauty of Kent.....	R. I. Greening.....		

PRESTON COUNTY.—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Seek-no-Further ...	Red Vandevere ... Jonathan..... Prior's Red..... Pound Royal	..... ..... ..... .....	Sweet Russet. Bough Sweet. Maiden Blush.			

Preston county does not grow apples in a commercial way, yet nearly every farm is provided with an orchard which furnishes the home supply and some for market. The best orchards are found upon the ridges, which as a rule are chiefly composed of broken down shale and sand rock. The fruits are of good quality and color, although usually medium in size. Trees are long lived, although during recent years the Scab and Brown Spot have both appeared in the orchards. The county possesses considerable areas well adapted for fruit culture, and as the M. & K. R. R. is in operation transportation facilities will be afforded not only for orchard products, but as well for cabbage, onions and celery, which can be grown to a high degree of perfection in the alluvial soils of the Glades.

PUTNAM COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty.....	Ben Davis.....	Ben Davis.....	<i>Yellow Transparent</i>	<i>Yellow Transparent</i>	Gano.....	Golden Drop.
Rambo.....	Rome Beauty.....	Rome Beauty.....	Grimes Golden....	Golden Drop....	Arkansas.....	Rome Beauty.
Golden Sweet.....	Grimes Golden....	Grindstone.....	<i>Ben Davis</i>	Rome Beauty....	Wealthy.....	Rambo.
Baldwin.....	Romanite.....	Romanite.....	<i>Golden Sweet</i>	Limber Twig....	Ben Davis.....	Romanite.
Grimes Golden....	Spitzenburgh....	Roxbury Russet..	<i>Maiden Blush</i>	Grimes Golden..	Rome Beauty....	Jennettings.
<i>Yellow Transparent</i>	Baldwin.....	Arkansas Mam'h Black Twig.	<i>Gano</i>	Red Astrachan..	<i>Yellow Bellflower</i>	
Pound Royal.....	R. I. Greening....	Gano.....	Rail's Genet.....	Blue Pearmain..	Winesap.....	
Cooper.....	Winesap.....	Golden Russet....	Smith's Cider.....	Ben Davis.....	Limber Twig....	
Early Chandler....	Arkansas Mam'h Black Twig.	Jenneting.....	<i>Rome Beauty</i>	Early Harvest..	Red Astrachan.	
Red Astrachan....	Gano.....	Crawford's Keeper	Iron Apple.....	.....	Pound Royal.	
Tulpehocken.....	Red Astrachan....	Shockley.....	Orange.....	.....	Baldwin.	
Early Harvest....	Run com e—Red Pearmain.	Peck's Pleasant..	<i>Early Harvest</i>....	.....	<i>Yellow Trans-</i>	
Maiden Blush....	Wealthy.....	Milam.....	Nickajack.....	.....	parent.	
English Russet....	Crawford's Keeper	Hill's Favorite....	Oldenburg, Duchess of.	.....	
Yellow Bellflower..	Roxbury Russet..	Winesap.....	<i>Willow Twig</i>....	.....	
White June Eating.	Willow Twig.....	Russet.....	<i>Jenneting</i>....	.....	
Ben Davis.....	Golden Russet....	.....	Bough, Sweet.	.....	
Northern Spy.....	Shockley.....	.....	Baldwin.	.....	
Hubbardston.....	Peck's Pleasant..	.....	<i>Winesap</i>....	.....	
Roxbury Russet..	Fallawater.....	.....	Tetolski.	.....	
Famuse.....	Mann.....	.....	Shockley.	.....	
Wealthy.....	English Russet..	.....	Wealthy.	.....	
			Fall Rambo.	.....	

Putnam county, like the counties bordering on the Ohio river, possesses large areas of land well suited to fruit culture on both banks of the Kanawha river. This river is improved, and carries a line of boats which afford satisfactory water communication for all points along the Ohio and lower Mississippi rivers. In addition the most likely fruit districts are also crossed by two lines of railroad, which

might by a little judicious encouragement of the fruit business increase their own earnings through this section, and bring thousands of dollars to the owners of farms along their lines. The successful orchards, both of apples and peaches, now standing upon suitable sites are sufficient to demonstrate that the fruit business in this section is not a hazardous undertaking. Then, too, the fruit list, as well as the fruit map, justifies the statement that great opportunities here await the intelligent cultivator.

RALEIGH COUNTY.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty..... Winesap..... Pearmain..... Yellow Transparent..... Early Harvest..... Yellow Bellflower.....	Rome Beauty..... Ben Davis..... Benoni..... Shockley..... Tompkins King..... Yellow Transparent..... Lumber Twig.....	Ben Davis..... Rome Beauty..... Red Pearmain..... Shockley..... Bellflower.....	<i>Rome Beauty</i> Ben Davis..... Shockley..... Early Harvest..... Maiden Blush..... Baldwin.....	Rome Beauty..... Winesap..... Milam..... Ben Davis..... Yellow Transparent..... Tompkins King.....	Yellow Bellflower..... Baldwin..... Maiden Blush..... Fallawater..... Ben Davis..... Yellow Transparent..... Tompkins King.....	Ben Davis. Buckingham. Pearmaine. Rome Beauty. Winesap. Milam. Early Harvest.
Baldwin..... Maiden Blush..... Sweet Russet..... Northern Spy..... Smith's Cider..... Rambo.	..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... .....	..... Red Astrachan..... Smith's Cider. Golden Russet.	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....

Reports indicate that the eastern portion of the county is suited for apple culture, but in addition the general elevation and contour of the county would suggest that a considerably larger area, as indicated by the red on the map, may prove suitable to the culture of the fruit. Transportation facilities, which are only afforded to the eastern portion of the county, will undoubtedly keep the commercial feature confined to that part of the county. At present the product is only about equal to the home demand. The variety list offers a considerable range for selection among dessert fruits, but the market sorts are in reality confined to Ben Davis and Rome Beauty.

RANDOLPH COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty.....	Ben Davis.....	Ben Davis.....	Early Harvest....	Early Harvest....	Grindstone.....	Black Apple.
Rambo.....	Northern Spy.....	Rome Beauty.....	Romanite.....	Fallawater.....	Fallawater.....	Belmont.
Early Harvest.....	York Imperial.....	York Imperial.....	Waldour.....	Ben Davis.....	Early Harvest..	Summer Pear-main.
Fallawater.....	Baldwin.....	Roxbury Russet..	Rambo.....	Rambo.....	Black, Jersey....	Twenty-Ounce.
Grimes Golden....	Grimes Golden....	Grindstone.....	Fallawater.....	Tompkins King..	.....	White Pippin.
Ohio Beauty.....	Romanite.....	Romanite.....	.....	Johnson's Fine..	.....	White June.
Smokehouse.....	Grindstone.....	Russet.....	Black Jersey.....	Baldwin.....	.....	Rome Beauty.
Maiden Blush.....	Russet.....	Talman's Sweet..	Ben Davis.....	Northern Spy..	.....
Black Apple.....	Waldour.....	Limber Twig.....	Rome Beauty.....	Romanite.....	.....
Fall Wine.....	Fallawater.....	Tompkins King..	Tompkins King..	.....	.....
Red June.....	Rome Beauty.....	Rock Pippin.....	Yellow Transpar-ent.	.....	.....
Russet.....	Limber Twig.....	Northern Spy.....	Wealthy.....	.....	.....
Northern Spy.....	Spitzenburgh.....	Spitzenburgh.....	Limber Twig..	.....	.....
Yellow Transpar-ent.	Winesap.....	Fallawater.....	Spitzenburgh..	.....	.....
Winesap.....	Golden Pippin....	Arkansas.....	Golden Pippin..	.....	.....
Limber Twig.....	New Town Pippin.	Winesap.....	Arkansas.....	.....	.....
Red Astrachan....	Rambo.....	Rusty-Coat Milam.	Northern Spy..	.....	.....
Oldenburg, Duchess of.	Mann.....	Gano.....	Sops of Wine..	.....	.....
Chenango Straw- berry.	Winter Wine.....	New Town Pippin.	Winesap.....	.....	.....
Golden Pippin....	.....	.....	July Sweet.....	.....	.....
Wine Apple.....	.....	.....	Rusty-Coat Milam.	.....	.....
Twenty-Ounce.....	.....	.....	Yellow Bellflower.	.....	.....
			Oldenburg, Duch- ess of.	.....	.....

By soil and location Randolph is naturally a grazing county. At present, however, only about one-half of her territory has been reclaimed, the other portion remaining in natural forest, which in turn yields employment to many, and brings a large revenue. The

land already in the hands of the tillers of the soil has amply proven its fitness for the production of certain choice market and dessert fruits. Experience here, as elsewhere, has proven the elevated plateaus and hill-tops to be the most satisfactory location for regular bearing apple orchards. If the hills slope off to a valley carrying a stream of considerable size, such as the Tygart's Valley river, so much the better. It possible select elevated land with a northeast exposure. Buds start later in the spring, and are, consequently, less liable to injury from late frosts, a trouble which seems to be one of the greatest draw-backs to peach culture in the county. With the development of the coal in the western part of the county and the increased demand for all horticultural products which is certain to follow a good local market for a considerable quantity of fruit is assured.

RITCHIE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Winesap..... Porter..... Rome Beauty..... Russet..... Ward..... Malden Blush.....	Rome Beauty..... Ben Davis..... Grimes Golden..... York Imperial..... Malden Blush.....	Ben Davis..... Rome Beauty..... Grindstone..... York Imperial..... Rall's Genet.....	Cooper..... Ben Davis..... Winesap..... <i>Rome Beauty.</i> Yellow Transparent..... Malden Blush..... Rambo..... Early Harvest..... Romanite..... Rall's Genet..... Penneck..... Grimes Golden..... York Imperial..... Summer Queen..... Spice, Sweet.....	Rome Beauty..... Pound Royal..... Northern Spy.....	Cooper.....	Rome Beauty. Ben Davis.
Cooper..... Sweet June..... Northern Spy..... Fall Wine..... Vandevere..... Rambo..... Grimes Golden..... Roxbury Russet..... Pound Royal..... Winter Wine..... Yellow Bellflower.....	Cooper..... Roxbury Russet..... Fall Wine..... Winesap..... Vandevere..... Tulpehocken..... Rambo..... Northern Spy.....	Jonathan..... Cooper..... Winesap..... Baldwin..... Vandevere..... Russet..... Willow Twig..... Northern Spy..... Pearmain.....				

While Ritchie county makes no pretense of producing apples in a commercial way, the county, nevertheless, has a considerable area over which soil conditions and exposure are favorable to apple culture, as is suggested by the areas reported on the map. In addition to the reported area I have ventured to suggest the area marked red as a likely apple district. As is shown by the little map, page 96, this county is included in that territory covered by the frost of 1898. This was undoubtedly the exception, and while it should be held in mind, it should not discourage planting to meet the increasing local demand.

ROANE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Yellow Transparent.	Rome Beauty	Ben Davis	<i>Rome Beauty</i>	Willow Twig....	Rambo	Willow Twig.
Rome Beauty	Ben Davis	Rome Beauty	<i>Ben Davis</i>	Yellow Bellflow'r	Rome Beauty....	Yellow Bellflow'r
Early Harvest	York Imperial	Grindstone	Early Harvest	Fallawater	Ben Davis	Grimes Golden.
Pumpkin Sweet	Vandevere	York Imperial	<i>Vandevere</i> .....	.....	Belmont	Sweet Russet.
Winesap	Romanite	Rail's Genet	<i>Rambo</i> .....	.....	Winesap	
Rambo	Baldwin	Nickajack	Willow Twig .....	.....	Russet	
Early Strawberry ..	Belmont	Fallawater	Strawberry .....	.....	Yellow Vandevere.	
Golden Sweet	Pearmain	Robertson's Pearmain.	Stark .....	.....	Limber Twig.	
Malden Blush	Winesap	Romanite	<i>Malden Blush</i> ..	.....	
Grimes Golden	Stark	Willow Twig	Northern Spy ..	.....	
Summer Sweet	Northern Spy	Seek-no-Further ..	<i>Russet</i> .....	.....	
Summer Pearmain ..	Rail's Genet	Red Astruchan	<i>Grimes Golden</i> ..	.....	
Northern Spy	Grindstone	Stark	<i>Bentley Sweet</i> ..	.....	
Bough, Sweet	Big Hill	Baldwin	Wine-ap .....	.....	
Baldwin	Shockley	Northern Spy	<i>Golden Sweet</i> ..	.....	
Vandevere	Roxbury Russet ..	Lawver	Summer Pearm'n.	.....	
Rails Genet	Willow Twig	Rambo	Romanite .....	.....	
Ben Davis	Rambo	Pennock	Grindstone .....	.....	
Nonsuch	Russet	Roxbury Russet ..	Sheep Nose .....	.....	
Big Hill .....	.....	Pound Royal	Pound Royal .....	.....	
Yellow Bellflower ..	.....	Winesap	<i>Wagner</i> .....	.....	
Pound Royal .....	.....	Tompkins King	<i>Summer Bellflower</i>.	.....	
Willow Twig .....	.....	Arkansas Mam'th ..	<i>Never Fail</i> .....	.....	
Smokehouse.	.....	Black Twig .....		.....

A glance at the map shows at once that Roane county contains a large area of surface suited to the profitable production of the apple. The reports, as well as a study of elevations and exposures, tell the same tale. The one handicap to the development of this industry to its fullest extent is lack of shipping facilities. The apple area is too far from the Ohio river to justify an attempt to haul such a bulky commodity for shipment by boat, even at the reduced rates offered. The only railroad at present entering the county is a branch from

Spencer to Ravenswood, on the main line of the Ohio River railroad. This taps the northern end of the apple section, and should tempt the owners of suitable land to plant orchards. The appended list of varieties carries all the standard dessert and market sorts, and with the increasing demand for good fruit there is no reason why, with good care and proper selection of sorts, commercial orchards should not prove a paying venture for the residents of the northern portion of the county.

SUMMERS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pit or cellar in fine condition for April market.	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Maiden Blush.....	Ben Davis.....	Ben Davis.....	Stark.....	Pearmain.....	Sops of Wine.....	Pearmain.
Rome Beauty.....	Rome Beauty.....	Rome Beauty.....	Swaar.....	Maiden Blush.....	Red Astrachan.....	Winesap.
Pound Royal.....	York Imperial.....	Ralls Genet.....	Twenty Ounce.....	Pound Royal.....	Rall's Genet.....	Smokehouse.
Red June.....	Rall's Genet.....	Roxbury Russet.....	Wealthy.....	Twenty Ounce.....	Early Ripe.....	Bough, Sweet.
Strump.....	Red Canada.....	York Imperial.....	<i>Rall's Genet.</i>	R. I. Greening.....	Early Strawberry.....	Buckham.
Golden Sweet.....	Shuckley.....	Bailey's Sweet.....	Early Ripe.....	.....	Nansemond.....	Rall's Genet.
Early Harvest.....	New Town Pippin.....	Limber Twig.....	Nansemond.....	.....	Green Pippin.....	Rome Beauty.
Early Ripe.....	Pound Royal.....	Pearmain.....	Early Harvest.....	.....	Rome Beauty.....	Yellow Bellflower.
Yellow Transpar-ent.	Limber Twig.....	Nansemond.....	Pound Royal.....	.....	Fallowater.....	Red June.
Fallowater.....	Crow Egg.....	Buncombe—Red Winter Pearmain.....	<i>Rome Beauty.</i>.....	.....	Ben Davis.....	Limber Twig.
Bough, Sweet.....	Yellow Transpar-ent.	Iron Apple.....	<i>Ben Davis</i>.....	.....	Red June.....	
Gravenstein.....	Red June.....	Wolf River.....	Red June.....	.....	Crow Egg.....	
Paradise, Sweet...	Yellow Bellflower.	Shockley.....	Tetofski.....	.....	Summer Pearmain.....	
Sops of Wine.....	Winesap.....	.....	Pearmain.....	.....	Winter Pearmain.....	
Winesap.....	Pearmain.....	.....	<i>Fallowater.</i>.....	.....	Yellow Bellflower.....	
Smokehouse.....	.....	.....	Paradise, Sweet.....	.....	Baldwin.....	
New Town Pippin.	Red Astrachan.....	.....	Yellow Bellflower.	.....	Rambo.....	
Rambo.....	Johnson's Fine Winter.	.....	Baldwin.....	.....	Maiden Blush.....	
Ben Davis.....	Northern Spy.....	.....	<i>Winesap.</i>.....	.....	Smokehouse.....	
Northern Spy.....	Russet.....	.....	<i>Johnson's Fine Winter.</i>	.....	Winesap.....	
Pumpkin Sweet.....	Rambo.....	.....	<i>Buckingham</i>.....	.....	Early Harvest.....	
Baldwin.....	.....	.....	<i>Rambo.</i>.....	.....	Northern Spy.....	

About one-half of this county is reported as suited for the production of apples. A contour study allows of even a greater venture, including quite three-fourths of the area of the county, as indicated by the red cross-hatching on the map. The large area in the county suited to the industry, together with the long lists of dessert and market fruits, should in itself be a sufficient guarantee for the success of the industry in the county. In 1898 this county produced 50,000 barrels of choice fruit. With an industry so well established, and with the transportation offered by the C. & O. R. R., commercial orchards should rapidly develop in regions accessible to the shipping points.

TAYLOR COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—undescended—bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Bough, Sweet. Lumber Twig. Rambo. R. I. Greening. Fallawater. Nansemond. Pound Royal. Northern Spy. Early Harvest. Rome Beauty. Grimes Golden. Smokehouse. Winter Russet. Baldwin. Yellow Bellflower.	Ben Davis. Rome Beauty. Baldwin. York Imperial. Grimes Golden. Waldour. Roxbury Russet. Northern Spy. Fallawater. Winter Rambo. Fall Janneting. Yellow Bellflower. Lumber Twig. Trader's Fancy. Tompkins King. R. I. Greening.	Ben Davis. Rome Beauty. Grindstone. York Imperial. Romanite. Red Romanite. Pound Royal. Lumber Twig. Fall Janneting. Fall Rambo. Roxbury Russet. Red Spitzenburg. Baldwin. Trader's Fancy. Winter Rambo. Wealthy. Nansemond.	Maiden Blush. Fall Rambo. Rome Beauty. Romanite. Lumber Twig. Northern Spy. McIntosh, Red. Red Astrachan. Pennyock. Fall Janneting. Fall Janneting. York Imperial. Bough, Sweet. Ben Davis. Early Harvest. Wealthy. Smokehouse. Baldwin. Roxbury Russet. Winter Winesap. Yellow Bellflower. Vandevere.	Early Harvest. Golden Sweet. Pound Royal. Tompkins King. Winter Russet. R. I. Greening. Rome Beauty. Fallawater. Bough, Sweet. Pennyock. Pennyock. Orange.	McIntosh, Red. Lumber Twig. Grindstone. Rambo. Ben Davis. Fameuse. Early Strawberry. York Imperial. Pennyock. Pennyock. Pennyock.	Early Harvest. Winter Russet. Wealthy. Yellow Bellflower. Grimes Golden. Pound Royal. Rome Beauty. Winter Rambo. Fallawater. Bendley. Red Romanite. Vandevere.

Although no reports were received to indicate the apple districts of Taylor county, yet its location in the same general section with Preston and Barbour render it certain that the county possesses areas well suited to the production of this fruit. The report of the crop of 1898 also indicates the truth of the above conclusion as a reference to the map on page 96 clearly shows. The railroad facilities of the county are among the best in the State. With proper encouragement a remunerative fruit business should be possible in this locality.

TUCKER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Pearmain	Ben Davis	Ben Davis	Rall's Genet.....	Winesap.....	Golden Russet...	Lawver—Delaware Red Winter
Rome Beauty.....	Rome Beauty	Rome Beauty.....	<i>Rome Beauty</i>	Nansemond.....	Gravenstein.....	Winesap.
Sweet Paradise.....	York Imperial.....	York Imperial.....	Ben Davis	Buckingham.....	Horse-Shoe Red..	Romanite.
Fallawater	Vandevere.....	New Town Pippin.	Yellow Transparent	Early Harvest...	Vandevere.....	Early Harvest.
York Imperial	Baldwin.....	Pearmain.....	York Imperial....	Tompkins King.	Fallawater	Princess Royal—Russian.
Northern Spy.....	Wolf River	Golden Russet....	Winesap.....	Baldwin.....	English Russet.	
Grimes Golden.....	Fallawater	Winesap.....	<i>Fallawater</i>.....	.....	E. I. Greening.	
Rambo	Golden Russet....	Winter Rambo....	Oldenburg, Duchess of	.....	
Pound Royal.....	York Stripe.....	York Stripe.....	<i>New Town Pippin</i> .			
Dominie—Winter Rambo.	Cooper.....	Fallawater	<i>York Stripe</i>			
Summer Rose.....	Tompkins King ..	.....	<i>Golden Russet</i> .			
Bough, Sweet	Maiden Blush.....	.....	Baldwin.....			
Smokchouse	Pound Royal.....	.....	Smokchouse.			
York Stripe.....	.....	.....	Maiden Blush.			
Moore's Extra.....	.....	.....	Vandevere.			
Yellow Bellflower.	.....	.....		

At present fruit growing forms little part of the general activity of the county. The fruit supply is not sufficient to meet the home demand. From the reports received, as well as from the elevation and character of the soil, the western, and particularly the northwestern, part of the county appears well suited to the industry. Reports of varieties grown also prove the locality suited to the production of the standard market and keeping sorts, as well as to a creditable list of dessert varieties. The fine fruit which has come under my observation in Barbour county leads me to believe that nature has done her part in Tucker county, particularly in that part indicated by the double cross-hatching on the map. As is the general verdict in all counties of the State, the hill orchards are most regular bearers, and the fruit is higher colored and better flavored, although that from the low-land orchards is frequently of larger size.

TYLER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pits or cellar in fit condition for April market.	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Rambo Seek-no-Further Romanite Russet Gillflower Rome Beauty Pound Royal Early Harvest Pumpkin Sweet Northern Spy Winesap Fallawater Smith's Cider Yellow Bellflower Grimes Golden R. I. Greening	Rome Beauty Ben Davis York Imperial Grimes Golden Baldwin Romanite Pound Royal Russet Northern Spy Red Pearmain Waldour Pound Royal Roxbury Russet Fallawater Smith's Cider Yellow Bellflower Grimes Golden R. I. Greening	Ben Davis Rome Beauty York Imperial Red Pearmain Romanite Baldwin Winter Pippin Russet Baldwin Stark Arkansas, Mam'h Black Twig Grindstone Lumber Twig	<i>Ben Davis</i> <i>Rome Beauty</i> Romanite Russet Baldwin Pound Royal Early Harvest <i>Waldour</i> Pumpkin Sweet Maiden Blush <i>Rambo</i> Fallawater <i>Golden Sweet</i> <i>Grimes Golden</i>	Rome Beauty ... Pumpkin Sweet... Fallawater Lumber Twig Pound Royal Golden Sweet ..	Red Astrachan... Early Harvest... R. I. Greening... Grimes Golden... Roxbury Russet.	Rome Beauty. Rambo Fallawater Peck's Pleasant. Pumpk weet.

The areas in Tyler which are usually devoted to commercial apple culture seem to be that of the western portion of the county lying between Middle Island Creek and the Ohio river. The chief reason for the development of the industry in this section is the better facilities afforded for marketing the fruit. The orchards producing fruits of highest color and quality generally cap the hills. While the river valley plantations produce abundantly, the fruit is usually of the fall varieties, and intended for local use. The winter sorts grown on the high lands are, as a rule, better keepers and higher colored than the same varieties grown on the river bottom. The soil of the hill orchards is usually a sedentary clay loam, while that of the bottom is a river deposit composed of sand, gravel and other detrital matter. The apple thrives well on either soil, but climatic conditions are conducive to the highest perfection of the Rome Beauty, one of the favorite varieties, on the hill tops. While apple growing is a well established industry of the county, its possibilities are far from fully developed.

UPSHUR COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Northern Spy..... Maiden Blush..... Fallawater..... Rambo..... Winesap.....	Ben Davis..... Rome Beauty..... York Imperial... Rall's Genet..... Romanite.....	Ben Davis..... Rome Beauty..... York Imperial... Romanite.....	Ben Davis..... Rall's Genet..... Bentley's Sweet... Yellow Transparenc... Grindstone.....	Bentley's Sweet... Northern Spy..... R. I. Greening... Pearmain.....	Romanite. Ben Davis. Early Harvest. Wine Apple.	
Early Harvest..... July Sweet..... Seck-no Further... Waldour..... Early Stripe..... Red June..... York Imperial..... Rome Beauty.....	Lumber Twig..... Roxbury Russet... Northern Spy..... Smokehouse..... Waldour..... Bellflower.....	Pearmain..... Grindstone..... Lumber Twig..... Maryland..... Winesap.....	Maryland..... Tompkins King... Early Stripe..... York Imperial... Red Astrachan... Early Harvest... Rome Beauty... Pewaukee... Summer Pearm'n.	Yellow Transparenc... parent. Strawberry. Lumber Twig. Grindstone.		

Little attention has so far been given to commercial fruit production in this county. The little produced, however, is of good quality, and this in connection with the list of sorts enumerated as suited to the county should encourage those possessing soils of a loamy nature situated well up on the hillsides or hilltops to plant orchards to meet the increased local demand, which is certain to follow the development of the mineral resources of the county. The eastern half of the county is one vast coal field, and the increased population which will come with the development of the mines will make a market for a large quantity of fruit.

WAYNE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly--underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty..... Maiden Blush..... Pound Royal..... Early Harvest..... Golden Russet..... Mann..... Rambo..... Sweet Russet..... Never Fail..... Smith's Cider..... Southern Queen..... Ben Davis..... Winesap..... Northern Spy..... Virginia Greening..... Yellow Transparent.....	Rome Beauty..... Ben Davis..... York Imperial..... Maiden Blush..... Winesap..... Romanite..... Meadow Sweet..... Baldwin..... English Rambo..... Missouri Pippin..... Smith's Cider..... Early Harvest..... Pound Royal..... Pound Royal..... Wolf River..... Red Jerneting..... Crawford's Keeper..... Grindstone..... Pearmain..... Willow Twig.....	Ben Davis..... Rome Beauty..... Grindstone..... Romanite..... Blue Pearmain..... Meadow Sweet..... Winesap..... Missouri Pippin..... English Rambo..... Never Fail..... Pound Royal..... Wolf River..... Virginia Beauty..... Lumber Twig..... Milam..... Willow Twig..... Fallawater..... Huff's Seedling..... Bongh, Sweet..... Black Detroit..... Early Strawberry..... York Imperial..... Blue Pearmain.....	<i>Pound Royal.....</i> <i>Ben Davis.....</i> <i>Rome Beauty.....</i> Early Harvest..... Sweet Russet..... Meadow Sweet..... <i>Romanite.....</i> <i>Roxbury Russet.....</i> <i>Strawberry.....</i> <i>Never Fail.....</i> Red Astrachan..... Smith's Cider..... <i>Crawford's Keeper.....</i> <i>Fallawater.....</i> Vandevere..... August Tart..... Black Detroit..... Willow Twig..... York Imperial..... Wealthy..... Justice King..... Maiden Blush.....	Rome Beauty..... Twenty Guince..... August Tart..... Wagener..... Northern Spy..... Early Harvest..... Maiden Blush..... Mann..... Haas..... Winter Pippin..... Russet..... Rome Beauty..... Smith's Cider..... Jumbo..... Crawford's K'p'r..... Blue Pearmaine..... Milam.....	Pound Royal..... Early Harvest..... Ben Davis..... Meadow Sweet..... Maiden Blush..... Romanite..... Mann..... Haas..... Winter Pippin..... Russet..... Rome Beauty..... Smith's Cider..... Jumbo..... Crawford's K'p'r..... Blue Pearmaine..... Milam..... Black Detroit..... Justice King.....	Early Harvest. Smith's Cider. Rambo. Ben Davis. Rome Beauty. Western Beauty.

At present the county produces scarcely enough fruit for local consumption. The southern portion of the county contains considerable areas possessing soil conditions congenial to the apple, and a line of railroad bisects it from north to south. With such areas as are tributary to the railroad, together with lands near the Ohio river, which will later prove their fitness for apple culture, this county should not long report an inadequate supply for home consumption. The variety list proves that all the standard market sorts are grown, and the indications are that the lack is that of orchards rather than suitable areas or varieties.

WEBSTER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Ben Davis.	Rome Beauty .....	.....	Grindstone.....	Win't Pearmain
Yellow Transparent.	Ben Davis.....	Rome Beauty	Ben Davis.....	.....	Maiden Blush.	
Pearmain.....	York Imperial....	Grindstone.....	Fallawater.....	.....	Rambo.	
Golden Russet.....	Winesap.....	York Imperial....	Rambo.	.....	
Pound Royal.....	Gano.....	Spitzenburgh.....	Lumber Twig.	.....	
Early Harvest.....	Grindstone.....	Lumber Twig	Pearmain.	.....	
Grimes Golden.....	Fallawater.....	Winesap.....	Early Harvest	.....	
Rome Beauty.....	Pippin.....	Hubbardston.....	Granberry Pippin.	.....	
Smith's Cider.....	.....	Jonathan.....	Tompkins King.	.....	
Bellflower.....	.....	Smith's Cider	Pennock.	.....	
Maiden Blush.....	.....	Big Hill.....	Bellflower.	.....	
Northern Spy.....	.....	Buckingham.....	Big Hill.	.....	
Pennock.....	.....	.....	Winesap.	.....	
Milan.	.....	.....		
Haas.	.....	.....		
Fallawater.	.....	.....		
Winesap.	.....	.....		

The map seems to indicate that Webster county has two sharply defined areas suited to the production of apples. Reports confirm the verdict of the surface for the northern half of the county, while reports from Pocahontas lead to the conclusions indicated by the red lines in the southern part of the county. Since the territory is an almost continuous coal field good local markets are certain to come with the removal of the coal. Persons owning land near mining towns should prepare themselves to meet this demand.

WETZEL COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT-RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varities which keep in pits or colliers in fit condition for April market	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Rambo	Rome Beauty	Ben Davis	Early Harvest	Rome Beauty	Fallwater	Golden Russet.
Northern Spy	Ben Davis	Rome Beauty	Bough Sweet	Golden Russet	Ben Davis	Rome Beauty.
Early Harvest	Baldwin	Romanite	Rambo	Yellow Bellflow'r	Northern Spy	Yellow Bellflow'r
Pound Royal	Russet	Grindstone	Winesap	R. I. Greening	Baldwin	R. I. Greening.
Yellow Bellflower	Grimes Golden	Russet	Golden Russet	Early Harvest	Winter Winesap	Lamber Twig.
Fallwater	Golden Russet	Golden Russet	Baldwin	Pound Royal	Russet	Maiden Blush.
Bough, Sweet	Fallwater	Fallwater	Red Astrachan	Russet	Rome Beauty	Rambo.
Fall Winesap	Northern Spy	Baldwin	Smith's Cider	Orange	Smith's Cider	Ben Davis.
Early Strawberry	Waldour	Northern Spy	Seck-no-Further .....	.....	Romanite	Red Astrachan.
Baldwin	Willow Twig	Willow Twig	Bethlehemite .....	.....	Romanite	Romanite.
Smith's Cider	Bethlehemite	Bethlehemite	Russet .....	.....	Yellow Bellflow'r	Red Romanite.
Orange	Alexander	Alexander	Alexander .....	.....	Maiden Blush	Roxbury Russet.
Bethlehemite	Maiden Blush	Maiden Blush	Ben Davis .....	.....	Golden Sweet	
Seck-no-Further	Red Astrachan	Black Jersey	Golden Sweet .....	.....	Red Astrachan	
Tompkins King	Yellow Tansparent	Sheep Nose	Spitzenburgh .....	.....	Transcendent	
Winesap	parent.	Vandevere	Grimes Golden .....	.....	Transparent	
Golden Sweet	Early Harvest	Stark	Maiden Blush .....	.....	
Grimes Golden	Yellow Bellflower	Lawver—Delta-ware Red Winter	Tompkins King .....	.....	
Maiden Blush	Smith's Cider .....	.....	Rome Beauty .....	.....	
Black Jersey	Bough Sweet .....	.....	Summer Rose .....	.....	
Rome beauty	R. I. Greening .....	.....	Yellow Transparent .....	.....	
Ben Davis	Bancome, Red Winter Pearmain .....	.....	Transcendent .....	.....	
Roxbury Russett	Pound Royal .....	.....		.....
Grindstone .....		.....		.....
Pearmain .....		.....		.....
Red Russet .....		.....		.....
Waldour .....		.....		.....

WETZEL COUNTY—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varities held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varities which keep in pit or cellar in fit condition for April market	Varities which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varities most exempt from scab.	Varities which suffer most from scab.
Penaukee..... R. T. Greening.....						

From all counties of the State fronting the Ohio river we get the same emphatic expression, that the hill lands produce orchards, which bear more regularly than the bottom lands, of fruits of higher color and better texture and keeping qualities. One reason for this may, however, be found in the fact that the Rome Beauty is a general favorite among growers in these localities, and that it is pre-eminently an upland variety. We are not, therefore, justified in a general condemnation of the valley land, for varietal differences are very marked, and are sufficient to account for much of the difference reported in favor of the hill land. Ordinarily it is best to follow the general experience of the locality, and for any who contemplate extensive plantations, I would say plant only well tested varieties on such land as has proven congenial to them both as regards elevation and exposure. As is indicated by the fruit list, the Rome Beauty is the general favorite as a market variety. Large areas are by soil and elevation suited for orchard purposes. This together with river frontage and its two railroads should foster the development of the apple industry in this county.

WIRT COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	CAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Fallawater..... Early Harvest..... Grimes Golden..... Bough, Sweet..... Rambo..... Yellow Transparent.	Rome Beauty..... Ben Davis..... York Imperial..... Grimes Golden..... Stark..... Winesap.....	Ben Davis..... Rome Beauty..... York Imperial..... Grindstone..... Romanite..... Grimes Golden.....	Wagenet..... Ralph's Genet..... Wolf River..... <i>Ben Davis</i> <i>Vandevere</i> Yellow Bellflower.	Rome Beauty ... Wealthy..... Fallawater..... Pound Royal.	Ben Davis. Bailey's Sweet. Lawver.	
R. I. Greening..... Early Strawberry..... Ben Davis..... Astrachan..... Hyslop..... Smith's Cider..... Lawver, Delaware..... Red Winter..... Vandevere..... June Sweet..... Maiden Blush.....	Missouri Pippin..... Willow Twig..... Grindstone..... Vandevere..... Pennock..... Rambo..... Golden Russet..... Baldwin..... Russet..... Lawver..... Black Bellflower. Roxbury Russet. Smith's Cider. Yellow Bellflower.	Winesap..... Winter Vandevere..... Stark..... Pennock..... Rambo..... Nickajack..... Ralph's Genet.....	Benoni. Rome Beauty. Smith's Cider. Bailey's Sweet. Maiden Blush. Willow Twig. Romanite.			

Wirt county, although handicapped by lack of transportation facilities, nevertheless possesses a large area which seems to be well fitted for the production of fruit. This conclusion, while confirmed by both the map and the list of sorts, is also confirmed by the experience of growers in Wood county, where some of the finest Rome Beauties grown in the State are produced, on the white clay lands which are scattered through the county. With the extension of railroads up the Little Kanawha river, and the improvement of the river itself, large areas in the western part of the county will undoubtedly be developed for orchard purposes. Reports indicate a preference for hillside areas with an eastern outlook or hill tops as sites for orchard purposes.

WOOD COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Red Astrachan..... Grimes Golden..... Early Harvest..... Early Stripe..... Chandler..... Rambow..... Smith's Cider..... Yellow Transparent. Roxbury Russet.... Early Strawberry... Fall Pippin..... Pound Royal..... Rome Beauty..... Winter Pearmain... Vandevere..... Pearmaine..... Winesap..... Yellow Bellflower..	Rome Beauty..... Ben Davis..... Grimes Golden..... Stark..... Winter Pearmain... Baldwin..... Yellow Bellflower.. Golden Gate..... Winesap..... Twenty Ounce.....	Ben Davis..... Rome Beauty..... Romanite..... Winter Pearmain... Grindstone..... Grimes Golden..... Baldwin.....	Ben Davis..... Rome Beauty... Red Astrachan... Pound Royal..... Smokehouse..... Rauler's Genet... Grimes Golden... Early Harvest..	Rome Beauty.... Roxbury Russet..	Ben Davis..... Rome Beauty... Romanite..... Smith's Cider... Rambo.....	Rome Beauty.

Certain sections of this county possess a soil and climate which enable it to produce the Rome Beauty in a state of high perfection, and, as might be expected, this is one of the most popular and best paying market sorts for the section. As indicated by the map, the southwestern part of the county seems particularly suited to orcharding, yet the small areas outlined in other parts of the county signify their special excellence rather than the unfitness of other sections. The commercial apple development already existing speaks more emphatically of the capabilities of the county in this respect than anything that could be expressed in this bulletin. To any one contemplating planting a commercial orchard in this county I say, visit successful growers possessing soil and climatic conditions like your own, learn of them the secrets of good tillage, spraying, harvesting and marketing, then, if possible, improve upon these practices.

NOTICE.

Application for bulletins of this Station should be addressed to the Director of the West Virginia Agricultural Experiment Station, Morgantown, W. Va.

(The bulletins named below are available for distribution.)

- No. 4. The Creamery Industry; Its Adaptability to West Virginia.
- No. 5. The Selection of Milch Cows.
- No. 14. Farm and Garden Insects and Experiments with Remedies; Notes of the Season.
- No. 15. Raspberry Gouty-Gall Beetle.
- No. 16. Yellow Locust, Insect Ravages upon.
- No. 17. Black Spruce, Insect Ravages.
- No. 19. Your Weeds and Your Neighbor's, Part 1. Weeds as Fertilizers.
- No. 25. Plat Experiments with Commercial Fertilizers on Wheat.
- No. 27. Notes on Pruning.
- No. 28. Plat Experiments with Commercial Fertilizers on Corn.
- No. 29. Experiments with Potatoes at the Station. Experiments on Corn at the Out Stations.
- No. 30. Address and Notes on Sheep.
- No. 33. Sub-Irrigation in the Green House.
- No. 38. Potato Blight, Potato Scab.
- No. 42. Vegetables.
- No. 43. When, Why, What and How to Spray.
- No. 44. Practical Entomology.
- Special Bulletin No. 2. Proceedings connected with the celebration upon the completion of the Station Building and the organization of the Sheep Breeders and Wool Growers' Association and the State Horticultural Society.

Third Annual Report, 1890.

No. 54. Nursery Hints.

No. 55. Sugar Beets.

No. 58. The Effect of Pressure in the Preservation of Milk.

No. 59. Whole Corn Compared with Corn Meal for Fattening Hogs.

No. 60. Poultry Experiments.

No. 61. Sheep Feeding Experiments.

No. 62. A Study of the Effects of Incandescent Gas-light on Plant Growth.

No. 64. Sugar Beet Investigation in 1899.

No. 66. Fruit Diseases and How to Treat Them.

No. 67. The Hessian Fly in West Virginia.

No. 68. Periodical Cicada or Seventeen-year Locust in West Virginia.

No. 69. Report on Examination of Wheat Stubble from Different Sections of the State, and on the Joint Worm in Wheat.

No. 70. Spraying.

No. 71. Poultry Experiments.

No. 72. Commercial Fertilizers.

No. 73. Poultry Experiments. Loss of Weight in Eggs During Incubation.

No. 74. Cold Storage.

